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- G. BROWN MILLER, M. D.,
Instructor in Gynecology, 1325 H Street
- FRANK E. MILLIS, Ph. D.,
Instructor in Astronomy, U. S. Naval Observatory
- FRANCIS P. MORGAN, A. B., M. D.,
Assistant to the Chair of Materia Medica and Therapeutics, in Charge
of the Pharmacy Laboratory, 1739 P Street
- EDWARD E. MORSE, M. D.,
Demonstrator of Obstetrics, 1527 I Street
- JAMES HENRY MOSER,
Instructor in Water Colors, 1113 G Street
- ELMER I. MOULDEN,
Assistant Librarian of the Law Library, 1420 H Street
- EDWARD ADAMS MUIR, B. S.,
Assistant Professor of Graphics, 323 Florida Avenue
- CHARLES EDWARD MUNROE, Ph. D.,
Dean of the School of Graduate Studies and Head Professor of
Chemistry, 2115 S Street
- CHARLES W. NEEDHAM, LL. D.,
President of the University, Professor of Transportation and Inter-
state Commerce Law, the History and Classification of Law,
Trusts, and Trades Unions 1833 Jefferson Place
- R. E. NELSON, JR.,
Instructor in Civil Engineering, 1707 P Street
- JOHN B. NICHOLS, M. D.,
Professor of Normal Histology, 1331 N Street
- THEODORE W. NOYES, LL. M.,
Member of the Board of Trustees, 1730 New Hampshire Avenue
- RAYMOND OUTWATER,
Assistant in Chemical Laboratory, 1312 B Street, S. W.
- MYRON M. PARKER, LL. B.,
Member of the Board of Trustees, 1020 Vermont Avenue
- Miss MINNIE M. PAXTON,
Superintendent of Nurses of the Hospital, 1335 H Street
- STANTON J. PEELE, LL. D.,
Professor of Law of Partnership, Agency, and Bailments,
The Concord
- ARTHUR PETER, LL. M.,
Professor of the Law of Real Property and Judge of Moot Court,
3014 N Street

- W. F. RAVENEL PHILLIPS, M. D.,
Professor of Hygiene and Demonstrator of Anatomy,
1607 Sixteenth Street
- F. H. POOLE,
Assistant Demonstrator of Anatomy, University Hospital
- D. W. PRENTISS, M. D.,
Demonstrator of Normal Histology, 1101 Fourteenth Street
- E. C. PRENTISS, M. D.,
Assistant Demonstrator of Anatomy, 1409 Rhode Island Avenue
- HENDERSON PRESNELL,
Assistant Professor of Library Science, 2107 First Street
- HENRY A. PRESSEY, B. S.,
Professor of Civil Engineering and Acting Professor of Applied
Mathematics, 1331 Vermont Avenue
- FRANK GUSTAVE RADELFINGER, M. A.,
Assistant Professor of Mathematics, 1431 Chapin Street
- LUTHER H. REICHELDERFER, M. D.,
Instructor in Medicine, Garfield Hospital
- CHARLES RUSSELL RICE, M. D., D. D. S.,
Demonstrator in Charge of Dental Infirmary, 57 K Street
- HERBERT LOUIS RICE, M. S.,
Professor of Astronomy, 2132 Thirty-fifth Street
- A. B. RICHARDSON, M. D.,
Professor and Clinical Professor of Mental Diseases, St. Elizabeth's
- CHARLES WILLIAMSON RICHARDSON, M. D.,
Professor of Laryngology and Otology, 1102 L Street
- EDWARD E. RICHARDSON, M. D.,
Prosecutor to the Chair of Anatomy and Assistant Demonstrator,
400 Seventh Street, S. W.
- J. LEWIS RIGGLES, M. D.,
Assistant Demonstrator of Anatomy and Instructor, 811 O Street
- CHANNING RUDD, D. C. L.,
Professor of Oratory, Assistant Professor of Law, and Secretary of
the Departments of Law, Jurisprudence and Diplomacy,
1305 Rhode Island Avenue
- STERLING RUFFIN, M. D.,
Professor of the Theory and Practice of Medicine and Professor of
Clinical Medicine, 1023 Vermont Avenue
- FRANK ROY RUTTER, Ph. D.,
Associate Professor of Economics, Department of Agriculture
- RAYMOND F. SAYER,
Instructor in Shades and Shadows and Perspective Drawing,
404 A Street, S. E.

- HERMANN SCHOENFELD, Ph. D., LL. D.,
Head Professor of German and Professor of Continental History,
1337 Twenty-second Street
- EMIL A. DE SCHWEINITZ, Ph. D., M. D.,
Dean of the Department of Medicine and Professor of Chemistry
and Toxicology, 1023 Vermont Avenue
- EDWARD G. SEIBERT, M. D.,
Associate in Chemistry, in Charge of the Chemical Laboratory,
Department of Medicine, 916 Fourteenth Street
- WILLIAM S. SHALLENBERGER, A. M.,
Member of the Board of Trustees, 1863 Mintwood Place
- AURELIUS RIVES SHANDS, M. D.,
Professor of Orthopedic Surgery, 1319 New York Avenue
- D. KERFOOT SHUTE, A. B., M. D.,
Professor of Anatomy, Clinical Ophthalmology, and Neurology,
1101 Thirteenth Street
- CHARLES S. SMITH, A. M.,
Assistant Professor of Greek and Latin, 2122 H Street
- AINSWORTH R. SPOFFORD, LL. D.,
Professor of Library Science, Library of Congress
- TIMOTHY W. STANTON, A. M., Ph. D.,
Instructor in Paleontology and Stratigraphical Geology,
54 S Street
- ALBERT L. STAVELEY, M. D.,
Clinical Professor of Gynecology, 1234 Fourteenth Street
- JAMES MACBRIDE STERRETT, A. M., D. D.,
Head Professor of Philosophy, Springland, Pierce Mill Road, D. C.
- GEORGE W. STONE,
Lecturer on Building Construction,
Supervising Architect's Office, Treasury Department
- EDWARD H. STROBEL, LL. B.,
Lecturer on Jurisprudence of France and of Spain,
Harvard University, Cambridge, Mass.
- CHARLES CLINTON SWISHER, Ph. D.,
Head Professor of History and Professor of Political Science,
Cosmos Club
- HANNIS TAYLOR, LL. D.,
Professor of Constitutional Common Law of England and of Inter-
national Private Law, 1700 Nineteenth Street
- HENRY CLAY THOMPSON, D. D. S.,
Professor of Operative Dentistry, 118 E Street
- J. FORD THOMPSON, M. D.,
Professor of Surgery, 804 Seventeenth Street

- ERNEST LAWTON THURSTON, C. E.,
Professor of Graphics, 1508 Kenesaw Avenue
- GEORGE CARROLL TODD, B. S., LL. B.,
Clerk of the Moot Court, 1454 Euclid Place
- EDMUND LEE TOMPKINS, M. D.,
Professor of Nervous Diseases, 1512 Q Street
- WILLIAM H. TRAIL, D. D. S.,
Demonstrator in Charge of Dental Infirmary, 612 Thirteenth Street
- MAYVILLE W. TWITCHELL, M. S.,
Instructor in Geology, Johns Hopkins University
- WILLIS VAN DEVANTER,
Professor of Equity Jurisprudence and Equity Pleading and
Practice, 2108 Wyoming Avenue
- JOHN VAN RENSSELAER, A. B., M. D.,
Professor of Surgical Pathology and Professor of Clinical Surgery,
2 Thomas Circle
- SAMUEL WALLIS, A. M.,
Instructor in Chemistry, 1752 Corcoran Street
- RICHARD WASHINGTON, M. D.,
Assistant Demonstrator of Anatomy, 1115 I Street
- CHARLES S. WHITE, M. D.,
Assistant Demonstrator of Anatomy and Instructor in Physiology,
1400 K Street
- WILLIAM ALLEN WILBUR, A. M.,
Head Professor of English, Corresponding Secretary of the
University, 1827 S Street
- HARVEY WASHINGTON WILEY, Ph. D., M. D.,
Professor of Agricultural Chemistry, 1314 Tenth Street
- J. ORMOND WILSON,
Member of the Board of Trustees, 1439 Massachusetts Avenue
- FRANK A. WOLFF, JR., Ph. D.,
Professor of Physics and Electrical Engineering, 1429 R Street
- SAMUEL WALTER WOODWARD,
Member of the Board of Trustees, 2015 Wyoming Avenue
- W. C. WOODWARD, LL. B., M. D.,
Professor of Medical Jurisprudence, 508 I Street
- CARROLL D. WRIGHT, LL. D.,
Professor of Statistics and Social Economics, 1345 Vermont Avenue
- HENRY C. YARROW, M. D.,
Professor of Dermatology, 814 Seventeenth Street

EDUCATIONAL ADVANTAGES OF WASHINGTON

The COLUMBIAN UNIVERSITY in the City of Washington was chartered by Congress in 1821. It comprises the following departments :

DEPARTMENT OF ARTS AND SCIENCES.
[UNDERGRADUATE AND GRADUATE.]

DEPARTMENT OF MEDICINE.

DEPARTMENT OF DENTISTRY.

DEPARTMENT OF LAW.

DEPARTMENT OF JURISPRUDENCE AND DIPLOMACY.

The Columbian University and the High-School System.

Washington is the natural center for university studies based on the High-School system of the United States. The Columbian University, in recognition of this fact, has reorganized its educational work in order to admit to its Department of Arts and Sciences the graduates of all approved high schools upon their certificates of graduation. This University begins the higher education with the student where the high school leaves him, and thus by correlating its work with the national system of education it seeks a national constituency. The conditions of life in the National Capital facilitate the growth of an educational institution that in organization and purpose and spirit embodies American ideas and ideals. The Columbian University aims to be such an institution, offering undergraduate and graduate courses in the arts and sciences and courses of professional study in medicine, in dentistry, in law, in jurisprudence and diplomacy. The geographical distribution of Columbian students is an evidence of the national character and significance of the University. On the first of June, 1902, the geographical distribution of students enrolled was as follows :

Geographical Distribution of Students.

Alabama.....	9	North Dakota.....	5
Alaska.....	1	Ohio.....	60
Arkansas.....	8	Oklahoma.....	3
California.....	6	Oregon.....	4
Colorado.....	6	Pennsylvania.....	82
Connecticut.....	10	Philippine Islands.....	1
Delaware.....	3	Rhode Island.....	3
District of Columbia.....	353	South Carolina.....	12
Florida.....	6	South Dakota.....	3
Georgia.....	15	Tennessee.....	25
Idaho.....	10	Texas.....	23
Illinois.....	58	Utah.....	4
Indiana.....	41	Vermont.....	4
Indian Territory.....	2	Virginia.....	102
Iowa.....	22	Washington.....	3
Kansas.....	19	West Virginia.....	12
Kentucky.....	27	Wisconsin.....	35
Louisiana.....	8	Wyoming.....	1
Maine.....	17	Armenia.....	1
Maryland.....	88	China.....	1
Massachusetts.....	39	England.....	1
Michigan.....	37	Germany.....	4
Minnesota.....	24	Japan.....	4
Mississippi.....	15	Korea.....	1
Missouri.....	17	Mexico.....	1
Nebraska.....	7	Peru.....	1
Nevada.....	1	Russia.....	2
New Hampshire.....	8	Switzerland.....	1
New Jersey.....	11	Turkey.....	1
New York.....	81		
North Carolina.....	23	Total.....	1,372

For Undergraduate Students.

To the undergraduate student Washington offers unrivaled opportunities for study. It possesses the academic atmosphere. The absence of commercial and manufacturing activity, the presence here of the largest body of scientific investigators in the country, the discussion of public questions, the spirit of nationalism, and the broad intellectual life constitute a humanizing influence of the greatest value in the development of the American scholar.

To students of science Washington is attractive, since the Government makes an annual appropriation of several millions of dollars for maintaining scientific work, which in its several departments has its headquarters here. The Washington Academy of Sciences and Affiliated Societies had, in 1902, a membership of 2,200. All branches of the physical and natural sciences are cultivated here, and the results of investigations are exhibited.

At a recent university opening, the Professor of Zoölogy, describing the vast resources for the student afforded by the Government collections and speaking with special reference to zoölogy, said :

"Let us, then, take a look at some of our collections and see what we have. If we visit the Smithsonian Institution and enter the chapel on the west end, we shall at first glance imagine ourselves transported to some submarine place, for here are exhibited the various forms of invertebrates, excluding the insects, mostly marine, ranging in size from the tiny protozoan to the monstrous giant cuttle-fish, all systematically arranged.

"What a boon to the teacher of zoölogy, after having considered a central figure or generalized type of a group in its minutest detail with his class, to be able to take his students to a place like this, where he will find carefully arranged representative series of organisms, embracing the chief modifications of the group, expressing their relationship and inter-relationship so beautifully that a glance at them will at once drive home the many points which the lectures previously attended have brought before them.

"Here, for instance, we find excellent glass models of that tiny unicellular organism which is ever of interest to the biologist carefully—yes, wonderfully—blown, magnifying the amoeba, which is scarcely $\frac{1}{100}$ of an inch in diameter, to a size of several inches, but showing each detail just as you would be prepared to see it under the microscope. Not only do we find this simple organism of the protozoan phylum, but also models, most elaborate plates, and even a host of specimens themselves of other unicellular organisms, representing forms gradually more complex in organization, many having a wonderfully formed skeleton, which in some cases is marvelously beautiful.

"Not only is what I said true of this phylum of single-celled animals, but of all the other groups. Among the Coelenterates there is a magnificent display of those extremely delicate, translucent forms, known to you perhaps as sea-nettles, jelly-fishes, or medusæ, whose preservation has only recently been made possible by the use of formaldehyde; and as for corals, why, the entire evening would scarcely suffice to give you an ade-

quate idea of that assemblage of specimens which adorn the shelves. Then you have the Echinoderms, those spine-armed fellows which you may know better as star-fishes, sea-urchins, sand-dollars, sea-cucumbers, and crinoids or sea-lilies.

"In the same way I might point out feature after feature of the remaining phyla. Not only do we find systematic series of these creatures from all lands and seas, but we also note splendid models of the chief groups, showing the various stages through which each individual must pass in its life history from the egg to the perfect or complete adult—changes as profound as they are complex and of the greatest significance, simplest in the lowest forms, but becoming more and more complex as we ascend the scale of life.

"As we leave the chapel and enter the court which connects this with the main hall we find ourselves amongst the insects, their work and their homes. "A huge collection; and we note again the same careful arrangement in natural groups, each with its popular descriptive label, telling one the chief characteristic of each family and genus, and in most cases even the prominent traits of the individual species and its status considered from an economic standpoint, all so pleasantly and interestingly told that I am certain those of you who will come to consider this part in your course will wish for more time than can be allotted to the work of this section.

"The main hall is largely devoted to the birds, and this collection embraces a splendid series of North American individuals; even the Great Auk and the Labrador Duck, birds which once were fairly abundant, but which, through the agency of man, have become wholly exterminated, are here represented. Nor is this all; for there are foreign sections embracing the various other zoö-geographical realms, each showing its own peculiar avifauna.

"If we extend our zoölogical researches to the National Museum we shall find one entire hall of the southeast range devoted to a collection of wonderfully life-like casts of fishes, reptiles, and amphibians, while another contains a mounted representative series of North American and foreign mammals. Then there is the hall of comparative anatomy, where we find were prepared skeletons of all the vertebrate groups so nicely displayed that you can make comparison without difficulty of the structural elements of each. Homologic series of structures representing the modifications of certain organs fill an entire range of cases and enable you to see at once the changes which they have undergone in the different individuals to fit them to the particular environment under which each is existing, while another part of the collection illustrates how profoundly changed even the skeletal structures may become when man enters the field and applies artificial selection. It is a hall full of problems of the deepest significance, for in these characters most of our classification finds its basis.

"There are still other halls and courts in this great building of accumulated scientific wealth, the contents of some of which take us back to the dim dawn of things, to the days when life put in its first appearance upon this sphere; collections which show us what this early life was and where it has been recorded. Still other specimens show what followed; and thus we find here, partly reconstructed, a minute plan of the fields in which are preserved the remains of the organisms which have flourished in the various ages from the Eozoic until the present day. Maps and charts show whence they came, while models, drawings, and careful labels help us to understand their detailed structure."

For Graduate Students.

There is hardly a branch of human activity that is not to some degree taken cognizance of by the National Government. Consequently, there are to be found here, in the archives of the State and other Departments and in the statistical bureaus of these Departments, extensive accumulations of original historical documents and data which are invaluable to graduate students in history, political science, economics, sociology, and the allied topics of research. In the great Library of Congress, the Public Library of the District of Columbia, and the many highly specialized libraries attached to the various Departments of the Government are to be found more than one million books, covering the range of human knowledge, and made easily accessible by well-designed catalogues. The Library of Congress has been classified topically, so as to render it more readily useful, and it is rapidly increasing its already large collection of standard works in all branches of philology and sciences. It offers every inducement to instructors and graduate students to avail themselves of the rich facilities there afforded in the pursuit of their special investigations. In the collections of the National Museum, the Smithsonian Institution, the Army Medical Museum, the Museum of Naval Hygiene, and the departmental museums are to be found extensive series of specimens, many of them "types" of great value to the student of anthropology, archæology, mineralogy, geology, paleontology, biology in all its branches, and other topics for research. In the Patent Office are to be found the records of the many inventions that have contributed so materially

during our national existence to modify the conditions under which we live.

In the experimental sciences the most notable advantages are to be found, since it is in Washington that the Weather Bureau, with its appliances for the study of national problems in meteorology, is centered; the Coast and Geodetic Survey, from which the surveys of our territory are carried on and by which the figure of the earth and terrestrial magnetism are experimentally determined; the Hydrographic Bureau, which conducts the surveys of our coast and the study of the oceans; the Bureau of Standards, which standardizes the instruments used in measuring mass, volume, heat, light, electricity, and all other magnitudes; the Geological Survey, which investigates the structure of the earth, ascertains our mineral resources, and supervises the sources of supply and means for distribution and control of water for irrigation purposes; the Department of Agriculture, which exists primarily for conducting original investigations for the benefit of agriculture in all its branches, and is therefore provided with extensively equipped laboratories for the study of chemistry, botany, vegetable physiology, entomology, bio-chemistry, bacteriology, comparative pathology, parasitology, the physics and chemistry of the soil, forestry, and microscopy; the Naval Observatory and Nautical Almanac Office, where researches in astronomy and navigation are conducted; the Marine Hospital Service, which deals with national problems in hygiene; the Bureaus of Construction and of Steam Engineering of the Navy, having supervision over the designs and construction of our ships; the Bureau of Yards and Docks, having supervision over the engineering operations at our navy yards and naval stations; the Bureau of Equipment, which is charged with the electrical installations for the Navy; the U. S. Signal Corps, which has supervision over the electrical installations for the Army; the Engineer Corps of the Army, which is charged with the river and harbor improvements throughout our domain, and the Light-house Board, which controls the system for lighting our navigable waters.

For the performance of these manifold duties there are gathered at Washington numerous expert engineers (civil, mechanical, mining, topographical, and electrical), mathematicians, astronomers, geologists, mineralogists, experts in all branches of natural science, physicists, chemists, and linguists. Naturally they have formed themselves into numerous special organizations for intellectual advancement, and it is possible here to listen every evening throughout the season to the presentation of the results of investigations and to the discussions of experts upon all branches of knowledge.

Of chemical laboratories for conducting the tests of materials, and especially for research work, there are now eighteen attached to the different departments at Washington. In the graphic arts there is especial activity, as map-making and chart-work is carried on in almost every bureau, while the Supervising Architect's Office of the Treasury Department is the largest office of its kind in the country. The student of pedagogy will find here abundant material collected by the U. S. Bureau of Education, while the mechanical engineer will be especially interested in the gun shops at the Navy Yard.

In view of the fact that in collecting archives and materials it was the original purpose of the Government "to promote research and the diffusion of knowledge," the Congress of the United States has made these treasures accessible to students under the terms of the following joint resolution, approved April 12, 1892:

"Resolved by the Senate and House of Representatives of the United States of America in Congress Assembled, That the facilities for research and illustration in the following and any other governmental collections now existing or hereafter to be established in the city of Washington for the promotion of knowledge shall be accessible, under such rules and restrictions as the officers in charge of each collection may prescribe, subject to such authority as is now or may hereafter be permitted by law, to the scientific investigators and to students of any institution of higher education now incorporated or hereafter to be incorporated under the laws of Congress or of the District of Columbia, to wit:

1. Of the Library of Congress.
2. Of the National Museum.

3. Of the Patent Office.
4. Of the Bureau of Education.
5. Of the Bureau of Ethnology.
6. Of the Army Medical Museum.
7. Of the Department of Agriculture.
8. Of the Fish Commission.
9. Of the Botanic Gardens.
10. Of the Coast and Geodetic Survey.
11. Of the Geological Survey.
12. Of the Naval Observatory."

For Students of Medicine and Dentistry.

To students of Medicine and of Dentistry there are excellent facilities for study and research. The Army Medical Museum, which is open for inspection daily, presents a field for study superior to any other institution of the kind, either in this country or in Europe. Its library of medical books and periodicals is the best in the world. Here, also, is published the well-known *Index Medicus*. It has an unrivalled collection of anatomical and pathological specimens, illustrating normal anatomy and the results of disease in every form, and an almost unlimited number of other preparations showing the effect of gunshot wounds and surgical injuries of every kind. It also contains almost numberless crania of every human nationality, by an examination of which the student can find many dentures of theoretical perfection, and observe the effect of civilization and race admixture upon the dental organs. At the United States Patent Office are models of every conceivable form of dental instruments. In the National Museum is found the most complete and best arranged collection of *Materia Medica* in the world. The drugs are shown in all their processes of manufacture, from the original package to the delicate alkaloid constituting the active principle.

An extensive new laboratory is being equipped for the Marine Hospital and Public Health Service. This is the national health department of the Government. In this laboratory and in the laboratories of the Department of Agriculture there are superior facilities for all kinds of bacteriological and chemical

investigations, and for the study of bio-chemistry, comparative pathology, and parasitology. The new laboratories and hospitals of the Army and the Navy also offer many opportunities for instruction.

For Students of Law, Jurisprudence and Diplomacy.

To students of Law, Jurisprudence and Diplomacy the peculiar advantages of Washington are manifest. The Supreme Court is in session from October to May, and on each Monday morning delivers opinions orally. Students may listen to these and thus keep in touch with the latest utterances of the greatest court. The Supreme Court Library is open to students, and the State Department, with its large library, affords facilities for the study of diplomacy. Congress is in session during the winter, and here the student sees the practical workings of the largest and most important legislative body, and listens to the discussion of matters touching interstate and foreign commerce and diplomatic relations. Here one comes into contact with the practical workings of the National Government in all its parts, and may secure the views and advice of practical men in all the great departments. Many of the lecturers in the Departments of Law and Jurisprudence and Diplomacy occupy the most important official positions in the gift of the nation and speak from a practical knowledge of the subjects they teach.

Department of Arts and Sciences.

UNDERGRADUATE AND GRADUATE.

UNIVERSITY SUBJECTS.

University subjects are divided into three sections, in accordance with the following requirement of an ordinance adopted by the Board of Trustees October 13, 1902 :

ARTICLE IV. SECTION 1. Subjects shall be divided into three sections, as follows :

(1.) The fundamental section, covering two years' work ; this section to be assigned to students in the general culture courses.

(2.) The advanced section, not exceeding three years ; this section to be assigned to students specializing for literary, scientific, professional, or industrial pursuits.

(3.) The original research section ; this section to be assigned to students pursuing a subject for discovery and broader culture.

The courses in the first section are sometimes recommended to graduate students, but are not ordinarily counted toward the master's degree.

The courses in the second section may be taken by students in the second year of their course only by special permission of the professor in charge.

The courses in the third section are open to undergraduates only on the recommendation of the instructors, and no undergraduate student shall take in one year more than one course in the third section.

When an announced course has not been applied for by at least three students, candidates for a degree, the instructor shall be at liberty to withdraw the course.

First-section courses are numbered from 1 to 19, inclusive ; second-section courses from 20 to 39, inclusive ; third-section courses are numbered on from 40. The number of hours, unless otherwise specified, indicates hours per week throughout the year.

No student is admitted to a course unless he fulfills all of the requirements for that course, or otherwise satisfies the instructor that he is prepared to pursue it.

Every student must make his election of courses so as to avoid conflict between the hours appointed for recitations.

APPLIED MATHEMATICS.

HENRY A. PRESSEY, B. S., Acting Professor of Applied Mathematics.

FAIRFAX BAYARD, C. E., Instructor in Applied Mathematics.

Second Section. For Undergraduates and Graduates.

- 20. Analytical and Applied Mechanics, Three hours.
- 21. Hydraulics, One hour.
- 22. Strength of Materials and Theory of Elasticity, Two hours.

ARCHÆOLOGY, CLASSICAL.

MITCHELL CARROLL, M. A., Ph. D., Lecturer on Classical Archæology.

Second Section. For Undergraduates and Graduates.

For a proper appreciation of the languages, literatures, and history of Greece and Rome, some knowledge of ancient life and art is essential. To meet this need, the following cycle of courses in Classical Archæology, extending over a period of three years, is offered. Each course consists of weekly lectures, illustrated by maps, plans, photographs, and lantern slides, supplemented by a prescribed course of reading and the preparation of papers on special topics. The work constitutes a two-hour elective for advanced undergraduate and graduate students, but the lectures are open to all students of the University. A knowledge of Greek or Latin is not essential.

20. Athens and Rome. A study of the history, topography, and monuments of the chief centers of ancient life. Given in 1903-04. Two hours.

21. Private life of the Greeks and Romans. A study of the ancient house, its architecture, furniture, and ornamentation; family life; education and amusements; dress, arms,

and armor; religious festivals, rites, and ceremonies, and other aspects of Greek and Roman life. Given in 1905-06. Two hours.

22. Introduction to Classical Archæology. An elementary course in Greek and Roman architecture and sculpture and other branches of archæology. Given in 1904-05. Two hours.

In all these courses considerable use will be made of the illustrative material accessible in the Corcoran Gallery of Art, the Smithsonian Institution, and the Halls of the Ancients.

ARCHITECTURE.

PERCY ASH, A. M., C. E., Professor of Architecture.

LOUIS AMATEIS, Professor of Fine Arts as Applied to Architecture.

JOSEPH C. HORNBLOWER, Lecturer on Architectural History.

RAYMOND F. SAYER, Instructor in Shades and Shadows and Perspective Drawing.

LOUIS A. SIMON, Instructor in Building Construction.

EDWARD WILTON DONN, JR., B. S., Instructor in Pen-and-Ink Drawing.

U. S. J. DUNBAR, Instructor in Freehand Drawing.

JAMES HENRY MOSER, Instructor in Water Colors.

First Section. Primarily for Undergraduates.

1. Freehand Drawing. One hour.
2. Architectural Drawing (the five orders). One hour.
3. Ornament. Six hours.
4. Architectural Drawing. A review of the orders, with details to a large scale; measured drawings of existing buildings; copies and enlargements of plans and working drawings. First term.
5. Architectural Design. Elementary composition; eight problems or the equivalent. Second term; a continuation of course 4.
6. Building Construction. One hour.

Second Section. For Undergraduates and Graduates.

- 20. Ornament. Six hours.
- 21. Ornament. Six hours.
- 22. History of Architecture. Egyptian, Assyrian, and Grecian. One hour
- 23. History of Architecture. Grecian and Roman. One hour.
- 24. History of Architecture. Romanesque, Renaissance, and Gothic. One hour.
- 25. Architectural Design. Seven problems or the equivalent.
- 26. Architectural Design. Six problems or the equivalent.
- First term.
- 27. Thesis. An original design; a discussion of an architectural problem.
- 28. Sanitary Science. One hour, one term.
- 29. Building Materials and Construction. Two hours.
- 30. Specifications. One hour, second term.
- 31. Building Materials and Construction. Two hours, first term.
- 32. Inspection of buildings erected or in course of erection.

The assigned problems in courses 4 and 5 and 25, 26, and 27 will require not less than twelve hours' work a week from each student.

A special course is arranged to suit the requirements of architectural or student draftsmen who may desire to supplement the practical experience of office work with special training in design, rendering, and other technical subjects. It is also open to others whose previous education is such that they can, in the opinion of the professor in charge, pursue the course to advantage. No entrance examinations will be required, but a certain degree of proficiency in drawing and the rudiments of architecture is expected. Special students may enter at any time and pursue any class of work for which they are fitted.

The special course comprises all the technical architectural work :

Drawing. Projections, shades and shadows, perspective.

Rendering. Pen and ink, wash and water color.

Architectural history complete.

Design, elements of architecture, orders, pilasters, pediments, inter-columniations, arcades, doors, windows, balconies, balustrades, domes, towers, etc.

Elementary design, theory of composition, proportion, etc.

Architectural composition, problems.

ASTRONOMY.

EDGAR FRISBY, A. M., Professor of Astronomy.

HERBERT LOUIS RICE, M. S., Professor of Astronomy.

FRANK E. MILLIS, Ph. D., Instructor in Astronomy.

First Section. Primarily for Undergraduates.

1. General Descriptive Astronomy. Young's General Astronomy, with occasional lectures illustrated with the stereopticon. The student is taught the use of star charts in locating the constellations. When circumstances permit, students will observe telescopic objects of interest, and also make some of the fundamental observations of practical astronomy, which will be used in the solution of problems. Two hours.

Second Section. For Undergraduates and Graduates.

20. Mathematical and Theoretical Astronomy. Theory taught mainly by lectures, supplemented by the solution of problems and practical computations. The course includes the discussion and application of various formulæ for interpolation and tabular differentiation and the practical precepts for correcting errors by means of differences; considerations respecting the elliptic form of the earth's meridian, and the derivation of formulæ for computing the "latitude reduction" and $\log \rho$; transformations of the various coördinate systems employed in spherical astronomy; the construction and use of the American Ephemeris, or Nautical Almanac, including computations of the principal quantities contained in that fundamental work; a discussion of the laws of planetary (elliptic) motion, and the application of Lagrange's Theorem to the solution of Kepler's problem and similar questions; the definition of the elements of an orbit, and their use in fixing the position of a planet in space; the reduction of heliocentric coördinates to geocentric, including the corrections for nutation and aberration, etc., etc. This course is at once thorough and comprehensive, and is designed to meet fully the requirements of both the theoretical student and the practical computer. A thorough training in mathematics is presupposed. Four hours.

Third Section. Primarily for Graduates.

40. The Theory of Computing the Parabolic Orbit of a Comet from Three Observations, with an ephemeris. Encke's Memoir

on Olbers' Method, *Abhandlungen, Erster Band*. Books of reference: Watson's *Astronomy*, Oppolzer's *Bahnbestimmung der Cometen und Planeten*.

41. The Theory of Computing an Elliptical Orbit, or any Conic Section, from Three or Four Observations. Gauss' *Theoria Motûs*. Books of reference, as above.

42. An outline of the Method of Least Squares. Encke, Chauvenet, Brünnow, Watson, Johnson.

43. The Theory of Special Perturbations, with Method of Integrating by Mechanical Quadratures. Encke: *Abhandlungen, Zweiter Band und Dritter Band*. Books of reference, as above. The method of the variations of the six elements will be first taught. The other methods of Hansen and of rectangular coördinates will follow if needed.

44. The Theory of General Perturbations. Tisserand, *Mécanique Céleste*. Books of reference: Laplace, *Mécanique Céleste*; Lagrange, *Mécanique Analytique*, and *Memoirs*; Leverrier, *Annals of the Paris Observatory*; Hansen, *Auseinandersetzung*; Pontécoulant, *Système du Monde*, etc.

45. General Spherical Astronomy. Chauvenet's or Brünnow's *Spherical Astronomy*.

50. On the construction and use of the American Ephemeris and Nautical Almanac. Embracing a complete discussion, both theoretical and practical, of all the important elements and data contained in this fundamental work. A practical course for computers.

51. Spherical and Mathematical Astronomy. A more general course than the preceding, covering the most important of the subjects discussed in Chauvenet's or Brünnow's works on Spherical and Practical Astronomy, and including such portions of Theoretical Astronomy (such as Watson's) as are not especially concerned with the determination of orbits.

52. On the Theory and Practice of Interpolation. A special course, including a full discussion of the properties of differences, the various formulæ and methods of interpolation, tabular differentiation, and mechanical quadrature; also other important problems concerned with the tabular values of functions, for those desiring special acquaintance with this fundamental and important subject.

53. A reading course in the History of Astronomy. Such works as Grant's *History of Physical Astronomy*, Clerke's *History of Astronomy during the Nineteenth Century*, etc., will be used as texts.

ASTRO-PHYSICS.

FRANK HAGAR BIGELOW, A. M., L. H. D., Professor of Astro-Physics.

Third Section. Primarily for Graduates.

40. Solar Magnetism. The constitution of the sun, the solar corona, the sun-spots and allied problems in solar physics, giving the grounds for the recent development of the theory that the sun is a polarized sphere surrounded by a magnetic field, which is the basis of these phenomena.

41. Cosmical Electricity and Magnetism. The two fields of force emanating from the sun, their mode of propagation through the ether, the theory of magnetic and electro-magnetic fields as applied to the theories of light, heat, and ether wave motions. Authors: Maxwell, Poincaré, Fleming, Watson, and Burbury, with references to the recent literature in scientific journals.

42. Terrestrial Magnetism. The distribution of the permanent magnetism of the earth, its disturbance by the solar fields, magnetic instruments, observatories and methods of observation, magnetic storms, the aurora, and atmospheric electricity, with a history of the progress of the science of each portion. Authors: Gauss, Lloyd, Walker, Stewart, and Gee, the reports of observatories and recent scientific papers.

43. Meteorology. The thermodynamic theory of the distribution of the atmosphere, the motions of the same, the periodic variations due to the solar fields, and the long-range predictions of the weather. A statement will be made of the latest progress in the development of this branch of physics, together with the allied questions of atmospheric absorption and transmission of energy, including important contributions of physical laboratories bearing on these subjects.

The results of the International Cloud Survey of the upper air; a comparative study of the theories of dynamic meteorology; Bigelow's standard system of equations useful in meteorology; the gradients of pressure, temperature, and vapor tension as determined by cloud computations, balloon and kite ascensions; these and related topics are included in this course.

BOTANY.

R. E. B. MCKENNEY, A. M., M. S., Ph. D., Assistant
Professor of Botany.

First Section. Primarily for Undergraduates.

1. General Morphology and Physiology of Plants. This course covers the more important facts and theories of plant structure and function. Lower and higher forms are studied. Text-books: Strasburger, Noll, Schenck and Schimper, Text-book of Botany. Lecture, one hour; laboratory, one two-hour period.

2. Plant Taxonomy. This comprises a study of the life history of typical flowerless and flowering plants, together with the chief characters of some of the leading plant families. The evolution of the larger plant groups is considered, as is also to some extent the geographical distribution of these groups. Text-books: Strasburger, Noll, Schenck and Schimper, Text-book of Botany, and Gray's Manual of the Botany of the Northern United States. Lecture, one hour; laboratory, one two-hour period.

Second Section. For Undergraduates and Graduates.

20. Special Morphology and Taxonomy. A comparative study of the principal families and higher groups of the plant kingdom. The geological and geographical distribution of the groups also receives brief consideration. Books: Goebel's Outlines of Classification and Special Morphology; Warming's Systematic Botany; Gray's Manual of the Botany of the Northern United States. This course is given in alternate years. Given in 1903-04. Lecture, one hour; laboratory, one two-hour period.

21. Experimental Plant Physiology. Advanced work in plant nutrition, respiration, growth, irritability, and reproduction. Books: Vine's Physiology of Plants, Bokorny's Pflanzenphysiologie; Darwin and Acton, Practical Physiology of Plants; Detmer-Moor, Practical Plant Physiology. This course is given in alternate years. Given in 1904-05. Lecture, one hour; laboratory, one two-hour period.

Third Section. Primarily for Graduates.

The following courses are open only to those who have had courses 1, 2, 20, and 21, or their equivalent:

40. Advanced Physiology. A critical review of recent discoveries and theories. Given in 1903-04. Lecture, one hour.

41. Ecology and Geographical Distribution. A study of the effect of climate, soil, and other factors on plant structure, function and distribution. Given in 1903-04. Lecture, one hour.

42. Advanced Laboratory. The work of the laboratory is divided in two parts: (a) Advanced study in special lines, (b) Research work. All graduate students must take this course. Those taking Botany as a minor will be required to take only the first part (a) of this course, and such must give at least six hours work. For major students the minimum time given to this course will be ten hours.

43. Seminar. This meets fortnightly, for the review of literature and for special papers and discussion. Two hours.

44. Cytology. Given in 1904-05. Lecture, one hour.

45. Bacteria and Fungi. Given in 1904-05. Lecture, one hour.

NOTE.—Courses 40 and 41 are given in alternate years with courses 44 and 45 respectively.

CHEMISTRY.

CHARLES E. MUNROE, Ph. D., Head Professor of Chemistry.

FRANK WIGGLESWORTH CLARKE, Sc. D., Professor of Mineral Chemistry.

HARVEY W. WILEY, Ph. D., M. D., Professor of Agricultural Chemistry.

THOMAS M. CHATARD, Ph. D., Lecturer on Chemical Engineering.

N. MONROE HOPKINS, Ph. D., Instructor in Chemistry.

SAMUEL WALLIS, A. M., Instructor in Chemistry.

WINTER F. BOWEN, Assistant in Assaying.

EDWIN A. HILL, M. S., Assistant in Chemistry.

RAYMOND OUTWATER, Student Assistant in Chemistry.

First Section. Primarily for Undergraduates.

1. General Chemistry. A series of illustrated lectures, accompanied by recitations and exercises, on theoretical, inorganic, organic, and technical chemistry. Three hours.

2. Laboratory Practice. A laboratory course for the study of the principles of chemistry and the methods of conducting chemical experiments. Two two-hour periods.

3. Preparation and Study of the Properties of Chemical Substances. Two two-hour periods.

4. Assaying and Metallurgy of the Precious Metals, carried on by the methods used by the Government assayers, the laboratory being fitted up on the plan of that of the United States Mint. Twelve hours, for three months.

5. Lectures on the Principles of Analysis. One hour.

6. Metallurgy of Iron and Steel. A course of lectures and readings. One hour.

Second Section. For Undergraduates and Graduates.

20. Qualitative Analysis. A laboratory course in the study of the properties and reactions of chemical substances, and of the means employed for their detection and identification. Four two-hour periods.

21. Quantitative Analysis. A laboratory course in the quantitative estimation of the constituents of a specially selected and typical set of chemical substances, which are particularly adapted for teaching the student the aims and methods of quantitative chemical analysis and for imparting facility in manipulation. Six two-hour periods.

22. Technical Analysis and Industrial Processes. A lecture and laboratory course in which the elements of chemical engineering are taught, and special attention is given to rapid commercial methods of analysis. Six two-hour periods.

23. Advanced course in Organic Chemistry. Two hours. Two years.

24. Chemistry of the Carbon Compounds. A laboratory course in the preparation and study of the properties of a characteristic series of organic compounds. Six two-hour periods.

25. Electro-chemistry. This course treats of the modern theories of chemistry, to which is added the consideration of the more important technical applications of electricity to chemistry. Two hours.

26. Stereo-chemistry. This course deals with the arrangements of atoms in space from a theoretical standpoint, while the student is taught how to form models by which to illustrate their arrangements. Two hours.

Third Section. Primarily for Graduates.

- 40. Explosive Substances.
- 41. Analytical Methods.
- 42. The Phenomena of Deliquescence and Efflorescence.
- 43. Development of the Theory of the Constitution of the Natural Silicates.
- 44. The Redetermination of Atomic Weights.
- 45. Special Researches in Agricultural Chemistry.

CIVIL ENGINEERING.

HENRY A. PRESSEY, B. S., Professor of Civil Engineering.

BERNARD HERMAN, B. S., Instructor in Civil Engineering.

R. E. NELSON, JR., Instructor in Civil Engineering.

First Section. Primarily for Undergraduates.

- 1. Land and Topographical Surveying, with theory and use of instruments. Practical Exercises and Field-work, not less than sixty hours during the session. Two hours.
- 2. Railroad and Highway Engineering. Field-work as in course 1. Two hours.
- 3. Sanitary Engineering (Water Supply and Sewerage). Two hours. Design. Two hours.
- 4. Materials of Construction. Two hours. Exercises. One hour.

Second Section. For Undergraduates and Graduates.

- 20. Masonry Construction. One hour. Constructive Exercises. Two hours.
- 21. Hydraulic Engineering (Rivers, Water Power, and Irrigation). One hour. Constructive exercises. One hour.
- 22. Framed Structures. Three hours. Design. Two hours.

Third Section. Primarily for Graduates.

40. Water Supply. Details of water works. Study of surface and underground waters as sources of supply, with special reference to methods of purification.

41. Sewerage. Details of sewerage systems, with special reference to methods of sewage disposal.

42. Hydrology. Flow of rivers, rainfall, and the effects of topography, forests, etc., upon the run-off of watersheds.

43. Irrigation.

44. Advanced course in the graphic statics of building construction.

45. The theory of suspension, continuous, cantilever, and braced arched bridges, with a more complete course in the design of plate girders, riveted and pin-connected bridges, with working drawings and estimates.

46. Advanced course in construction. The theory and designing of retaining walls, masonry arches, and dams.

47. Thesis, the subject of which is to be selected by the student and approved by the Professor of Civil Engineering.

CLASSICAL LANGUAGES.

MITCHELL CARROLL, M. A., Ph. D., Head Professor of Classical Philology.

CHARLES S. SMITH, A. M., Assistant Professor of Greek and Latin.

WILBUR F. DALES, Ph. D., Assistant Professor of Greek and Latin.

GREEK.

First Section. Primarily for Undergraduates.

1. Lysias (selected orations); Herodotus (selections); Euripides (Alcestis, Medea). Private reading required. Three hours. Asst. Professor SMITH.

2. Greek Prose Composition. Review of forms and syntax. Reading at sight and translation at dictation. One hour. Professor CARROLL.

3. Thucydides (Book VII); Æschylus (Persians); Demosthenes (Olynthiacs and Philippics); Sophocles (Antigone). Private reading.

Three hours. Professor CARROLL and Asst. Professor SMITH.

Second Section. For Undergraduates and Graduates.

20. Plato (Euthyphro, Apology, Crito); Aristophanes (Clouds); Xenophon (Memorabilia). Private reading.

Two hours. Professor CARROLL.

21. Greek Prose Composition (advanced course).—Practical oral exercises in syntax and translation. Original composition.

One hour. Professor CARROLL.

22. Greek Literary Criticism. Aristotle (Art of Poetry); Longinus (on the Sublime).

Two hours, second term. Professor CARROLL.

23. Greek Literature: A course of lectures tracing the history of Greek literature to the close of the classical period. This course is designed not merely for Greek students, but for all who are interested in literary studies. A knowledge of Greek is not necessary. One hour.

24. Topography and Monuments of ancient Athens.

Two hours, first term. Professor CARROLL.

LATIN.

First Section. Primarily for Undergraduates.

1. Livy (Books I-XXI); Cicero (de Senectute); Horace (Odes); Cicero and Pliny (Selected Letters). Private reading required.

Three hours. Professor CARROLL and Asst. Professor SMITH.

2. Latin Prose Composition. Review of forms and syntax. Reading at sight and translation at dictation.

One hour. Asst. Professor SMITH.

3. Tacitus (Agricola, Germania, Dialogus de Oratoribus);

Plautus and Terence (Selected Plays) ; Satires of Horace and Juvenal (Selections). Private reading.

Three hours. Professor CARROLL and Asst. Professor SMITH.

Second Section. For Undergraduates and Graduates.

20. Roman Literary Criticism. Quintilian (Book x) and Horace (Ars Poetica). Selected readings from other authors. Two hours, first term. Professor CARROLL.

21. Catullus and the Elegiac Poets (Tibullus, Propertius, Ovid). Conferences on History of Roman Literature. Two hours, second term. Professor CARROLL.

22. Latin Composition and Reading at Sight. Practice in Latin expression and style. Original essays in Latin. One hour. Asst. Professor SMITH.

23. Lucretius. One hour. Asst. Professor SMITH.

24. Linguistic Science. A course of lectures designed for students of either ancient or modern languages. The general principles of linguistic science are outlined and illustrated, and sketches are given of the various languages of the Indo-European family. One hour.

25. Topography and Monuments of Ancient Rome. Two hours, second term. Professor CARROLL.

Third Section. Primarily for Graduates.

THE SEMINARY OF CLASSICAL PHILOLOGY.

Professor CARROLL, Director.

The design of the Seminary of Classical Philology is to afford discipline in the methods of philological criticism and research with especial reference to the interpretation of classical authors. It is composed of all graduate students in Classical Languages, and is under the supervision of the Director, who is assisted by the other instructors of the department in certain features of the work. Each year two authors in related branches of Greek and Latin literature are made the center of study. Interpretations of the texts under consideration are

prepared by the members, and papers are read by them from time to time, containing the results of special study of philological or literary topics. Furthermore, wide and systematic reading in the authors selected is carried on under personal supervision, and special lectures are given from time to time on the departments of literature involved. The authors selected for criticism and interpretation in 1903-'04 are Aristophanes and Plautus. Two meetings of an hour and a half each will be held weekly at hours to be assigned later.

THE CLASSICAL CLUB.

The Columbian Classical Club, which is composed of instructors and advanced students in Greek and Latin and classical archæology, meets monthly for the more detailed discussion of special topics in ancient life, literature, and art than is ordinarily possible in the class-room. At each meeting a paper is read, reviews of recent classical publications are presented, and reports are made from the various sites of archæological excavation. The general subject of study for 1902-'03 is "Pompeii—its Life and Art." Teachers and patrons of the classics in Washington are admitted as associate members, and at open meetings the club avails itself, when possible, of the services of eminent scholars from other universities who may be temporarily in the city.

ECONOMICS.

CARROLL D. WRIGHT, LL. D., Professor of Statistics and Social Economics.

FRANK ROY RUTTER, PH. D., Associate Professor of Economics.

Third Section. Primarily for Graduates.

40. Advanced Political Economy. A study of the science and of the theories of economic study, of economic progress, and of practical economic problems.

41. Public Economy and Administration. (a) A comparative study of governmental activities. (b) Principles and methods of taxation. (c) A detailed examination of the United States Government, with occasional visits to the Departments

for the purpose of viewing their operations under the guidance of public officials.

42. **Municipal Economy.** A study of municipal functions in various countries, and of the corresponding forms of municipal government. The actual experiences of cities in dealing with the problems growing out of the concentration of population will be compared with a view to determining how far and in what direction the modern tendency toward the extension of municipal activities is advantageous.

43. **Laboratory Work in Statistics.** Practical training in compiling, tabulating, and analyzing statistics, and in preparing schedules of inquiries, with occasional visits to the Census Office and other statistical bureaus, and lectures by specialists on the methods employed in particular investigations. This course is intended for students desiring to use the statistical method in individual research, as well as for those wishing to prepare themselves for positions in the civil service. Those who have previously studied statistics should be prepared to take up in the statistical laboratory the particular subjects which interest them, without further preliminary drill.

44. **Comparative Legislation.** Each student is expected to make a thorough study of some phase of public control, and after reporting upon the experiences of various governments—national, state, or municipal, as the case may be—to prepare a bill, suitable for presentation to a legislative body, embodying the most approved principles and methods of dealing with the subject.

45. **Recent Industrial History.** The reports of the Industrial Commission and of the Twelfth Census, in addition to the materials heretofore available, afford an unusual opportunity for studying the recent industrial development of the United States and obtaining a cross-section view of the industrial organization of the country at the close of the nineteenth and beginning of the twentieth centuries. Besides reports on topics assigned to students, there are addresses from time to time by various specialists on the subjects under consideration.

46. **Social Science.** A systematic study will be made of various classes of organizations for promoting social welfare. The regular work will be supplemented by occasional visits to philanthropic institutions in and near Washington.

ELECTRICAL ENGINEERING.

FRANK A. WOLFF, JR., Ph. D., Professor of Electrical Engineering.

PHILANDER BETTS, M. S., Instructor in Electrical Engineering.

First Section. Primarily for Undergraduates.

1. Elementary Mathematical Theory of Electricity and Magnetism. Text-book: S. P. Thompson's Elementary Lessons in Electricity and Magnetism. Three hours, first term.

2. Dynamo-electrical Machinery. Text-book: Hawkins and Wallis, The Dynamo. Three hours, second term.

3. Electrical Measurements. A laboratory course for students in the Electrical Engineering Course. Text-book: Carhart and Patterson's Electrical Measurements. Three two-hour periods.

Second Section. For Undergraduates and Graduates.

20. Advanced Mathematical Theory of Electricity and Magnetism. Text-book: Gerard's Electricity and Magnetism (translated by Duncan). Three hours, first term.

21. Dynamo-electric Machinery. Advanced course. Text-books: S. P. Thompson's Dynamo-electric Machinery and Polyphase Currents; Jackson's Alternating Currents. Three hours, second term.

22. Technical Applications of Electricity. A course covering the most important applications of electricity: Telephony, Telegraphy, Lighting, Power Transmission, Electro-metalurgy, Electro-chemistry, etc. Two hours.

23. Advanced Laboratory Work for students in the Electrical Engineering Course. Dynamo and motor-testing, determinations of characteristics, etc. Three two-hour periods.

24. Inspection of Electric Light and Power Plants, etc. In the vicinity of Washington and Baltimore are a number of modern electric-lighting and street-railway plants, telephone exchanges, telegraph operating-rooms, etc., which afford students of electrical engineering an excellent opportunity to familiarize themselves with nearly all types of electrical apparatus in use. The visits are followed by a class discussion.

Occasional meetings are held at which papers on special subjects are read by advanced students.

Third Section. Primarily for Graduates.

40. Technical Applications of Electricity: A course of special lectures on the most recent and most important applications of electricity to industrial and scientific use. Two hours.

41. Design of Direct and Alternating Current Machinery. Two hours.

42. Advanced Course in the Mathematical Theory of Alternating Currents. Three hours, first term.

43. Advanced Course in Polyphase Currents. Three hours, second term.

44. Advanced Laboratory Work, Alternating (including Polyphase) Current Apparatus. Three two-hour periods.

ENGLISH.

WILLIAM ALLEN WILBUR, A. M., Head Professor of English.

First Section. Primarily for Undergraduates.

1. Rhetoric. This course presupposes a knowledge of the elements of rhetoric. The objects of the course are: an exposition of the principles of rhetoric; a verification of these principles by the analysis of selections from the best writers, with definite practical deductions to guide in criticism and composition; the application of these principles in paragraph and theme writing. Text-book: Genung's Working Principles of Rhetoric. Two hours.

2. Rhetoric. This course presupposes a knowledge of the elements of rhetoric. It is like Course 1, with the same text-book and the same objects. The two courses in rhetoric constitute two divisions of the same class. Two hours.

3. Prose. A critical study of representative prose works in a chronological order, ranging from Roger Ascham to Robert Louis Stevenson. The intent of the course is by inductive and comparative studies to show the development of a standard prose style and the main tendencies of change in the standard through three centuries. This course requires the careful study of about twenty books. It is open to students who have passed in Course 1 or 2. Three hours.

4. English Literature. A course of lectures tracing the historical development of the literature with the design of giving a general view of the literature of England and emphasizing its consistency in the persistence of a certain distinctive quality. Students taking this course are required to read Taine's History of English Literature. One hour.

5. American Literature. Lectures and class studies in biography and literature. Students taking this course are required to read widely in the literature. One hour.

Second Section. For Undergraduates and Graduates.

20. Composition. An advanced course in English Composition, with practice in various forms of discourse and studies in criticism. Essays are written weekly. These are exchanged and criticisms are written during the hour. Essays and criticisms are finally revised and returned. Wendell's English Composition is used as a handbook. The course is open to students who have passed in Course 1 or 2. One hour.

21. Old English. An elementary course; the essentials of the grammar and readings from Old English texts. Text-books: Cook's First Book in Old English; Cook's Exercises in Old English. Two hours.

22. Shakespeare. The Tragedies and Romances. Given in 1902-03. Three hours.

23. Shakespeare. The Comedies and Romances. Given in 1903-04. Three hours.

24. Shakespeare. The English Historical Plays. Given in 1904-05. Three hours.

NOTE.—The Temple edition of Shakespeare is recommended.

27. The English Novel. Development of the Novel, with critical studies of selected works, including some contemporary fiction. Given in 1902-03. Three hours.

28. Tennyson. The poetry of Tennyson. Two hours.

Third Section. Primarily for Graduates.

40. English Philology. One hour.

41. The English Drama. One hour.

42. Milton. One hour.

GEOLOGY AND MINERALOGY.

GEORGE P. MERRILL, Ph. D., Professor of Geology and Mineralogy.

TIMOTHY W. STANTON, A. M., Ph. D., Instructor in Paleontology and Stratigraphical Geology.

MAYVILLE W. TWITCHELL, M. S., Instructor in Geology.

First Section. Primarily for Undergraduates.

1. Mineralogy. Crystallographic, descriptive, and determinative mineralogy. This course is designed with especial reference to minerals as rock constituents or segregated as ore deposits. It includes, therefore, a discussion of not merely the crystallographic and theoretical, but the practical side of the subject as well. Whenever possible, it should be considered as introductory to the courses in either systematic or economic geology. Two hours.

2. Geology. Systematic geology; dynamical, structural, and stratigraphical. The course is designed to form a part of a general culture course, or a preliminary course for those intending to make a specialty of geology. It includes lectures, recitations, laboratory and field work. Paleontology is treated as a branch of geology, having especial reference to stratigraphy and correlation. Text-books: Scott's Introduction to Geology; Merrill's Rocks, Rock Weathering and Soils. Two hours.

Second Section. For Undergraduates and Graduates.

20. Economic Geology. The course consists largely of lectures upon the subjects comprised under: (1) Mineral veins and metalliferous deposits, their mode of occurrence, origin, and classification; (2) the ores of iron, copper, lead, zinc, tin, silver, gold, mercury, antimony, etc.; and (3) the non-metallic minerals, as the coals and hydrocarbon compounds; salts and materials used in chemical manufactures; abrasive, refractory, and fictile materials, pigments, gems, ornamental stones, building stones, limes, cements, and mineral waters. Text-books: Kemp's Ore Deposits of the United States; Merrill's Stones for Building and Decoration, and the Non-metallic Minerals. Two hours.

Third Section. Primarily for Graduates.

Advanced study in Geology, both systematic and applied, is arranged to cover two years.

40. Advanced Geology. The student in this first-year course may devote his time largely, if necessary, to perfecting himself in methods; to general work in the laboratory and in the field; to the examination of geological materials, and to familiarizing himself with the literature of the subject. The utility of the various text-books is recognized, but a very large portion of the desired knowledge on any subject must be gained from special memoirs and from the current literature as it appears in numerous periodicals. The various sources of information, the most essential lines of work, as well as the most promising fields of investigation, are from time to time indicated by the instructor.

41. Advanced Geology: A continuation of Course 40. The student is expected to devote himself to some special investigation which shall serve as the subject of his thesis. The course is modified to suit individual cases, in order that the student may be restricted as little as possible in the exercise of personal taste, originality, and capacity for work.

GERMAN.

HERMANN SCHOENFELD, Ph. D., LL. D., Head Professor of German.

CARL HAU, A. M., Instructor in German.

First Section. Primarily for Undergraduates.

Instruction in German has, as its primary object, a thorough knowledge of the grammar and familiarity with the general literature and history, with such practice in conversation as shall serve as a stimulus in the furtherance of this object. The principles of grammar are illustrated from the class readings and composition.

1. A preliminary course in grammar, narrative prose, the elements of historical reading, and select poems of the principal modern poets. Special stress is laid on exercises in composition. One classic (Schiller) is studied. The work done is equivalent to a two years' course in high schools or academies of good standing. Three hours.

2. The deeper aspects of grammar; accurate training in phonetics and translation into German; conversation; read-

ings from the best German prosaists and poets; selected texts from Schiller, Lessing, Goethe, Freytag. Beginnings of German literature and history. Special preparation for scientific professional work. Open to students who have passed Course 1 or have fulfilled the entrance requirement in Elementary German. Three hours.

3. Advanced course in German syntax; principal difficulties of the language; idioms; synonyms; extensive translation of the best English prosaists into German; essays; selected advanced prose; classical reading and literature; German history. Special training for advanced students in the historic and economic departments. Open to students who have passed Course 2 or have fulfilled the entrance requirement in Advanced German. Three hours.

Second Section. For Undergraduates and Graduates.

20. German Literature in the first half of the nineteenth century; its social and political aspects; the Romanticists; essays, lectures, and collateral reading. Two hours.

21. Literary awakening in Germany in the time of Frederick the Great; critical study of the literary centers—Leipzig, Zürich, Göttingen, Berlin. The Storm and Stress Period and the youthful works of Schiller and Goethe; critical investigation of Klopstock's Odes; Messias. Two hours.

The intervening periods of Modern German Literature will be studied during the subsequent academic year.

Third Section. Primarily for Graduates.

40. German Literature in the sixteenth century. Braune's Neudrucke Deutscher Literaturwerke. Humanism and Reformation, with special reference to Italian and French influences. Historical basis after Voigt, Janssen, Ranke, Burckhart, Geiger. One hour.

41. German Literature in the twelfth and thirteenth centuries, with special regard to the Nibelungen lay and the Gudrun saga. The lyrics of Walther von der Vogelweide. The grammatical aspects of the classics of the First Period of Bloom. Two hours.

The other phases of older German literature and philology will be studied in subsequent years, so that the general range of the History of German Literature may be covered every three years.

GRAPHICS.

ERNEST L. THURSTON, C. E., Professor of Graphics.

EDWARD ADAMS MUIR, B. S., Assistant Professor of Graphics.

First Section. Primarily for Undergraduates.

1. Mechanical Drawing. A course designed to give a knowledge of the fundamental principles of mechanical drawing and to prepare for higher technical drawing. A study of geometrical and graphical constructions, including higher curves; elementary orthographic and isometric projections, sections, and intersections; dimensioning, lettering, and conventional symbols; first principles of working drawings and tracings. Two hours, with supplementary exercises.

2. Machine Drawing. A general course in reading drawings and in drawing-room practice, including: A study of the names and arrangement of views and sections; conventional methods and the nomenclature of machine parts; practice in describing the machine and its operation from the drawing. One hour (special students, two hours).

3. Machine Drawing. A course designed especially for mechanical and electrical engineering students. Projections of intersections and development of surfaces; conventional forms, rules, etc.; the construction and reading of working drawings. Two two-hour periods for one term.

For advanced students additional work is offered during the second term, including the construction of working drawings and sketches from models; detailing from general drawings; tracing and blue printing; designing by means of graphic methods and empirical formulæ.

8. Descriptive Geometry. A study of the representation of lines, surfaces, and solids and of their relations; tangencies, intersections, and developments; warped surfaces; shades and shadows; original construction problems. Two hours; supplementary exercises, two hours.

9. Lettering as Applied to Mechanical, Topographic, and Architectural Drawing. Two hours.

10. Topographic Drawing. A general course, including: hypsographic expressions; topographic, cadastral, and public culture symbols; scales and plotting; projections, reductions, and enlargements; compilation, plain and in color. Two hours, with supplementary exercises.

11. Topographic Modeling, including the collection of data, the plotting of contours, and the construction of cardboard and plaster models. Two hours, with supplementary exercises.

Second Section. For Undergraduates and Graduates.

20. Graphic Statics. Principles and methods, including the construction and use of load, stress, and moment diagrams; dead, live, snow, and wind loads; the graphic analysis of simple beams, girders, roof trusses, and bridge trusses; simple designing. Two hours; supplementary exercises, two hours.

21. Mechanics of Machinery; the graphical statics of mechanism. Three hours for one term.

25. Statistical Drawing. The reduction of statistics and tables to maps, charts, diagrams, and technical drawings. One hour, with supplementary exercises.

Third Section. Primarily for Graduates.

40. Geometry of Position. A study of the subject as developed by projective methods based on the works of von Staudt, Steiner, etc.

41. Graphic Statics. This science may be studied:

(1) As a part of Applied Mechanics, based on the works of Culmann, Ritter, Koechlin, Chambers, etc.

(2) As a part of Analytic Mechanics, based on geometry of position.

42. Systems of Projection. A comparative study of the theories and principles of known systems, with their applications to technical drawing and map projection.

45. The History and Development of Technical Drawing from earliest times. Class and research work.

HISTORY AND POLITICAL SCIENCE.

CHARLES CLINTON SWISHER, Ph. D., Head Professor of History and Professor of Political Science.

HERMANN SCHOENFELD, Ph. D., LL. D., Professor of Continental History.

ANDREW FULLER CRAVEN, Ph. D., Professor of Politics and Economics.

EDWARD FARQUHAR, Ph. D., Professor of History.

JOHN W. HOLCOMBE, A. M., M. Dip., Assistant Professor of Political Science.

HISTORY.

First Section. Primarily for Undergraduates.

1. Mediæval History. A general survey of the more important phases of the history of Europe from the Teutonic invasion to the Fall of Constantinople. Text-book, lectures, and collateral readings. Two hours.

2. Modern European History. A history of the European states under the new conditions brought into action by the Protestant Revolution, the invention of printing and the discovery of America through the period of the French Revolution. Text-book, lectures, and reports. Two hours.

3. A preliminary discussion of the sources and materials of history, historical literature and geography, and the purpose and methods of historical study. One hour, lectures.

Second Section. For Undergraduates and Graduates.

20. Contemporaneous European History. The history of Europe from the period of the French Revolution, with a discussion of present political conditions in Europe. Lectures and examinations. Open to students who have taken Course 1. One hour.

21. English History. Text-book, reports, and collateral reading. Two hours, first term.

22. American History. Social and economical conditions of the English colonists in America leading to political differentiation and subsequent revolution. The acquisition of new territory and national development under the Constitution. Text-book, reports, and collateral readings. Open to students who have taken Course 21. Two hours, second term.

23. English Constitutional History. Parliamentary usages developed under the Normans and early Plantagenets; in abeyance under the Tudors; triumphant under the later Stuarts. The rise of party government under the Whig oligarchy of the Revolution until triumph of the democracy in the reforms of the nineteenth century. Lectures, discussion, and collateral

reading. Open to students who have completed Courses 21 and 22. Two hours, first term.

24. American Constitutional History. Constitutional development traced through colonial charters and "Articles of Confederation" until formulated in the Constitution of 1789. Interpretation of the Constitution, under the pressure of party issues, through the period of division and reconstruction. Lectures, discussion, and collateral reading, open to those who have completed Courses 21, 22, and 23. Two hours, second term.

25. History of the British Empire. Evolution of the imperial idea; colonial expansion of England; England in Asia, America, Australasia, and Africa; the problem of imperial federation. Lectures and collateral reading, open to students who have completed Course 21. One hour.

26. English Diplomatic History. Development of English foreign policy. England on the continent. The policy of Wolsey realized under Cromwell and William of Orange. Struggle for balance of power transferred to the colonies. The Eastern question. Lectures and collateral reading. Open to students who have completed Courses 21 and 25. One hour.

POLITICAL SCIENCE.

20. The Historical Basis of Political Institutions. The genesis and development and differentiation of political institutions under the influence of local environment, with special study of Athenian democracy, Roman imperialism, and the blending of Roman and Teutonic institutions in the Feudal system. Lectures, conferences, and examinations. Open to students who have completed Courses 2 and 20 in history. Two hours.

21. The Historical Basis of Political Institutions. The evolution of the modern state traced through the period of centralization, revolution and subsequent reaction with a comparative study of the resulting political institutions, especially in England, Germany, France, Switzerland and the United States. Open to students who have completed Courses 2, 20, 21 and 22 in history. Two hours.

22. An analytical study of the nature of the State and of public administration; the life and conduct of the State; the art of politics. Two hours.

23. Speculation as to the origin of government; its ethical bases and the ideal form of the perfect State; the theory of politics. Two hours.

24. Social Integration and Disintegration in Mediæval and Modern Europe. Two hours.

25. Individualism, Socialism, and the Social Problems of State and Municipal Administration. Two hours.

Third Section. Primarily for Graduates.

Graduate seminars will be held weekly by the several professors of History and of Political Science for the prosecution of research work and the discussion of reports upon subjects previously assigned for investigation.

LIBRARIES AND ARCHIVES.

AINSWORTH R. SPOFFORD, LL. D., Professor of Library Science.

W. DAWSON JOHNSTON, A. B., Professor of Bibliography and Bibliology.

HENDERSON PRESNELL, A. B., Assistant Professor of Library Science.

WILLIAM P. CUTTER, B. S., Assistant Professor of Library Science.

IRENE GIBSON, Instructor in Library Science.

First Section. Primarily for Undergraduates.

1. The Library Instruction Field; History and Art of Printing; The World of Books; History of Publishers; Book-sellers and Book-buyers; The Genesis of Libraries; Uses of Libraries; Titles of Books; Bibliography, (1) Universal, (2) British, (3) American. One hour.

2. Bibliography, (4) European, (5) Literature of Subjects; Equipment of Librarians; Various Habits of Reading; Memory—Uses and Aids; Book Selections for Libraries; Book-binding; Care of Books; Pamphlets and Periodicals; Rare Books and Common Books; Illustrated Literature; The Library and the Press. Each topic is treated in one or more lectures, as its relative importance may demand. One hour.

NOTE.—Courses 1 and 2 are given in alternate years.

3. Elementary Classification; Shelf Arrangement; Shelf Department Work. Lectures on systems of classification, supplemented with practical classification of books according to the Decimal and Cutter systems.

Library Administration. Accounts, stock-taking, care of supplies, and statistics of readers, etc.

Library Administration. Loan systems; charging systems inter-library loans. Bibliographies of the literature on the subjects.

Rules. Access to shelves; librarian's reports examined and reviewed; the relation of librarian to trustees and to the public; library buildings, furniture, and fittings, light, heat, and ventilation, etc. Bibliographies on these subjects. Two hours.

4. Author Cataloguing. The students are carefully trained to make all the entries necessary for an author catalogue.

Order Department Work. Order slips, order and serial blanks, gift list. Inspection and purchase of books. Reception, checking bills, collation, preparation for shelves—*e. g.*, stamping, labeling, etc. Accessioning.

Subject Cataloguing. Instruction on methods.

Dictionary Cataloguing. The same books are used as in the "author cataloguing," but are here selected with reference to subject-matter.

Reference books useful to cataloguers in finding full names and in deciding subject headings.

Shelf Department Work. Assigning book numbers according to Cutter and Edmands' tables. Shelf-listing on cards and on large and small sheets.

A select list of books is chosen for each lesson, the students being required to catalogue each set. The work is handed in, corrected, returned, and preserved by them, thus forming a model for each student. Lectures, two hours; practice, six hours.

Second Section. For Undergraduates and Graduates.

20. Organization of Libraries. Library legislation, associations, clubs, commissions, library schools. Traveling libraries, etc. Bibliographies on these subjects.

Reference Work. Readers' guides. Indexes and indexing, with practical indexing of books. Helps for readers and students, etc.

Preparation of theses on various subjects in Library economy, with bibliography of the literature on the subject. Two hours.

21. Comparative Study of Catalogue Codes. Twenty points in ten different codes of cataloguing rules are studied comparatively. Study of some important European and American

catalogues—*e. g.*, Bibliothèque Nationale of Paris, Königliche Bibliothek of Berlin, British Museum Library, Boston Public Library, Boston Athenæum, etc.

The equipment and cost of a card catalogue, including distribution of cards from a central bureau. The printing of catalogues, of finding lists, of accession lists, etc. Lectures on cataloguing manuscripts, incunabula, and rarities. Advanced list of reference books useful to cataloguers.

In addition to the theoretical study of the subject, a part of each evening is devoted to the consideration of the treatment of entirely new books. Each student is required to prepare independently a certain number of them for the shelves, thus acquiring actual experience in accessioning, labeling, classifying, shelf-listing, cataloguing, etc. Lectures, two hours: practice, six hours.

(Students in this subject are given an opportunity to obtain practice in typewriting.)

Third Section. Primarily for Graduates.

40. Bibliography and Bibliology. The Professor advises students as to the best methods of work and the accepted methods of presentation of results. Unusual opportunities are afforded students in this subject in the meetings of the Washington Library Association, which are held at stated intervals at The Columbian University.

MATHEMATICS.

JAMES HOWARD GORE, Ph. D., Head Professor of Mathematics.

HOWARD LINCOLN HODGKINS, Ph. D., Professor of Mathematics.

FRANK GUSTAVE RADELFINGER, M. A., Assistant Professor of Mathematics.

HARRY GRANT HODGKINS, A. B., Instructor in Mathematics.

First Section. Primarily for Undergraduates.

1. Solid Geometry; Gore's Plane and Solid Geometry. Three hours for two months. Professor GORE.

2. Geometry; Gore's Plane and Solid Geometry. Two hours. Professor HODGKINS.

3. Algebra; Bowser's College Algebra. Three hours for three months. Professor GORE.

4. Algebra; Bowser's College Algebra. Three hours. Professor HODGKINS.

5. Plane Trigonometry; Crockett's Plane and Spherical Trigonometry. Three hours for two months. Professor GORE.

6. Trigonometry; Crockett's Plane and Spherical Trigonometry. Three hours for four months. Professor HODGKINS.

7. Spherical Trigonometry; Crockett's Plane and Spherical Trigonometry. Three hours for two months. Professor GORE.

8. Analytic Geometry; Bowser's Analytic Geometry. Three hours for four months. Professor HODGKINS.

9. Analytic Geometry; Nichol's Analytic Geometry. Three hours for four months. Professor GORE.

11. Theory of Equations; Barton's Theory of Equations. Three hours for two months. Professor GORE.

NOTE.—Courses 2 and 4 are intended for students who desire to review some parts of elementary algebra and plane geometry, in order to obtain that thorough and ready knowledge of these fundamental mathematical studies that is necessary for their proper use in other subjects. These classes are not intended for beginners, and only students who have studied elementary algebra and plane geometry will be admitted.

Courses 1, 3, and 5 are designed to occupy one year; likewise Courses 2 and 4.

Engineering students whose time will permit are advised to complete during their first year Courses 1, 3, 5, 6, and 8.

Second Section. For Undergraduates and Graduates.

21. Differential and Integral Calculus; Taylor. Three hours for six months. Professor GORE.

23. Differential Equations; Osborne. Three hours for two months. Professor GORE.

24. Differential Equations. Johnson's Differential Equations. Two hours. Professor HODGKINS.

In all of the above courses the text is supplemented by lectures and the principles emphasized by proposing for solution a large number of problems taken from the best European and American authorities

While the disciplinary value of the study of mathematics is never lost sight of, the importance of its practical application is insisted upon.

Third Section. Primarily for Graduates.

41. Theory of the Complex Variable. Lectures with reference to Durege and Forsyth. Three hours for four months. Professor GORE.

43. Functions. Lectures with reference to Harkness and Morley, Briot and Legendre. Three hours for four months. Professor GORE.

44. Functions arising from the solution of differential equations. Two hours.

MECHANICAL ENGINEERING.

EDWARD ADAMS MUIR, B. S., Assistant Professor of Graphics.

PHILANDER BETTS, M. S., Instructor in Mechanical Engineering.

LOUIS E. GILES, B. S., Instructor in Mechanical Engineering.

First Section. Primarily for Undergraduates.

1. Machine Design. Proportioning of the following machine parts: Fastenings, toothed and belt gearing, rotating and sliding pieces, bearings, and connecting rods. Two two-hour periods, second term. Two two-hour periods, first term.

2. Kinematics. Nature of mechanisms. Diagrams of the changes of position and speed in mechanisms. Three hours, second term. Two hours, first term.

3. Boilers. Location, construction, strength, and wear and tear of boilers. Two hours, second term.

Second Section. For Undergraduates and Graduates.

20. Thermodynamics. The steam-engine and other heat engines. Three hours.

21. Mechanical Technology. Shop visits. Examination of processes and appliances pertaining to pattern-making, molding, casting, forging, and finishing. Two two-hour periods.

22. The Mechanical Engineering of Power Plants. Three hours, second term.

23. Machine Design. Theory of and calculations for a high-speed steam-engine. Four hours.

24. Mechanics of the Machinery of Transmission. Four hours.

25. Measurement of Power. Practical work in indicating steam-engines, determining the evaporative efficiency of boilers, &c. Three periods.

Third Section. Primarily for Graduates.

The course of study leading to the degree of Mechanical Engineer includes the following subjects: Steam-engine, Zeuner's diagrams, gas engine, and mechanics of machinery. In addition, the students are required to do individual work in taking indicator diagrams and making engine and boiler tests. The following works indicate the range of subjects:

Riggs' Steam-engine; Zeuner's Diagram's; Clerk's Gas Engine. Weisbach-Hermann's Mechanics of Machinery: Hoisting machinery, accumulators, cranes, locomotives, etc. Day's Indicator Diagrams and Engine and Boiler Testing. Weisbach-Hermann's Mechanics of Machinery: Pumps, pumping engines, blowing engines, compressors, and fans.

METEOROLOGY.

CLEVELAND ABBE, A. M., LL. D., Professor of Meteorology.

First Section. Primarily for Undergraduates.

1. Observational Meteorology. The student will keep a personal diary of the meteorological conditions. The lectures will relate to instruments and methods of observing, computing, and graphic presentation of results. Two hours.

Second Section. For Undergraduates and Graduates.

20. General Climatology. The lectures will cover all the elements of climate and some of the physical processes explaining the phenomena, the theory of probabilities so far as it is applied to climatology, and the determination of the coefficients or other factors that represent climatological peculiarities. Two hours.

21. Special subjects in climatology and meteorology and the

relation of climate to geology, vegetation, anthropology, hygiene, and human industries. Two hours.

Third Section. Primarily for Graduates.

40. Experimental and Laboratory Work in Meteorology. The lectures will treat of the theories of instruments; the laws of meteorological phenomena, so far as they are susceptible of laboratory experiment; the differences in methods of reduction and publication.

41. Practical Meteorology. The lectures will treat of cartography, daily weather charts, methods of predicting the weather for a few days, long-range predictions for seasons, methods of verification, and the climates of past geological ages.

42. Physical and Theoretical Meteorology. The lectures will sketch the present state of our knowledge of atmospheric phenomena as a problem in thermodynamics and hydrodynamics. An extensive course of reading and private study will be marked out for the pupil, and his thesis for the degree of Ph. D. must be in the field of physical meteorology.

PHILOSOPHY.

JAMES MACBRIDE STERRETT, A. M., D. D., Head Professor of Philosophy.

WILLIAM T. HARRIS, LL. D., Professor of Philosophy.

E. N. KIRBY, A. B., Professor of Philosophy.

First Section. Primarily for Undergraduates.

1a. Psychology. The aim is to make this work a preparation for an intelligent study of Ethics and Philosophy. A careful study is made of the phenomena of intellect, feeling, and will as organic processes of the man developing into conscious universal relations. A text-book is used, with lectures, themes, and constant reference to the leading works on Psychology. Three hours, for three months.

1b. Logic. Creighton's or Minto's Logic is used as a text-book. Three hours, for two months.

1c. History of Philosophy. Outlines of the History of Philosophy. On alternate years special attention will be given to (a) Greek philosophy, (b) modern philosophy. Text-books: Schwegler, Windelband, and Falckenberg. Three hours, for three months.

Second Section. For Undergraduates and Graduates.

20. Historical Ethics. A study of the chief ethical theories; the members of the class are required to study the text of Aristotle, Kant, Mill, and Spencer, and to hand in well-prepared abstracts of their systems. The class-room work is devoted to a critical exposition of these and other theories by means of lectures and discussions. Three hours, first term.

21. Theory of Ethics. A critical and constructive theory of Ethics, including a course of lectures on the fundamental postulates, concepts, and principles of Christian Ethics. Three hours, second term.

22. History of Greek Philosophy. Special study of Plato and Aristotle. Knowledge of Greek is desirable for one taking this course. Lectures, prescribed readings, and theses. Two hours, second term, alternating with Course 23.

23. History of Modern Philosophy. Lectures, prescribed readings, and theses. A reading knowledge of French and German is desirable. Two hours, second term, alternating with Course 22.

Third Section. Primarily for Graduates.

40. The Philosophy of Nature. A critical study of the fundamental concepts of Modern Physical Science. Prescribed readings, reports, and theses; Pearson's Grammar of Science; Stallo's Concepts and Theories of Modern Physics; Ward's Naturalism and Agnosticism; Holman's Matter, Energy, Force, and Work. Two hours, first term.

41. The Critical Philosophy of Kant. This course will presuppose a knowledge of the History of Philosophy. Some knowledge of German is essential. The work will be devoted chiefly to the study of Kant's Critique of the Pure Reason. Two hours, second term, alternating with Course 42.

42. Hegel's System. Open to those who have taken Courses 23 and 41. Knowledge of German required. The work will be chiefly upon Hegel's Logik. Two hours, second term, alternating with Course 41.

43. The Philosophy of Religion. Open to those who have taken Courses 20, 21, 41, and 42. Caird's Introduction to the Philosophy of Religion; Sterrett's Studies in Hegel's Philosophy of Religion. (Omitted in 1903-04.) Two hours, second term.

44. Ten lectures on the Philosophy of History; syllabus of prescribed readings, with theses and examination. Open to students who have taken at least Courses 22 and 23 in Philosophy and some courses in History. Two hours, second term. Professor HARRIS.

45. The Society for Philosophical Inquiry, of which the Professor of Philosophy is president, meets every Tuesday during the year. Work can be arranged in this connection to count as a two-hour course for the year.

PHYSICS.

HOWARD L. HODGKINS, Ph. D., Head Professor of Physics.

EDGAR BUCKINGHAM, Ph. D., Instructor in Physics.

First Section. Primarily for Undergraduates.

1. General Physics. A recitation and lecture course, embracing the fundamental principles of mechanics, sound, heat, light, and electricity. The lectures are illustrated by experiments. Plane trigonometry is used in the course, and only students who have completed or are studying trigonometry will be admitted. Three hours.

2. Laboratory Physics. A selected series of experiments, mainly quantitative. This course is designed to familiarize the student with the ordinary methods of exact experimentation, and to extend the knowledge of the principles of physics as gained in Course 1. This course is taken by Bachelor of Arts students who elect Course 1. Two two-hour periods.

3. Laboratory Physics. Similar to Course 2, and required of all Bachelor of Science students. Three two-hour periods, one term.

Second Section. For Undergraduates and Graduates.

20. Sound. A lecture and laboratory course. Three periods.

21. Heat. A lecture and laboratory course, based on Preston's Theory of Heat and Maxwell's Theory of Heat. Three periods.

22. Light. A lecture and laboratory course, based on Preston's Theory of Light. Three periods.

Third Section. Primarily for Graduates.

40. Light. Advanced study, experimental and mathematical, of some one branch of the subject. Three periods.

Students who desire to specialize in physics should take Courses 1 and 2 or 3 in the first year, and should also study mathematics. In the second year one of the courses, 20, 21, or 22, may be taken; in the third year the two remaining courses may be taken. In order to do this, calculus should be studied during the second year.

ROMANCE LANGUAGES.

GEORGE N. HENNING, A. M., Head Professor of Romance Languages.

JULES MAILLET, Assistant in French.

FRENCH.

First Section. Primarily for Undergraduates.

1. Grammar, composition, drill in pronunciation. Fraser and Squair's French Grammar. Translation and reading of nineteenth century fiction and history. (400-500 pages) For beginners. Open only to students in the Bachelor of Arts course. Three hours.

2. Identical with Course 1. Open only to students in the Bachelor of Science course.

4. Grammar, composition, conversation. Fraser and Squair's French Grammar. Grandgent's Selections for French Composition. Translation and reading. Daudet, *Trois Contes*; A. Dumas, fils, *la Question d'argent*; Mérimée, *Colomba*; A. France, *Sylvestre Bonnard*; Molière, *l'Avare*; Sarcey, *le Siège de Paris*; Coppée, *le Pater*; Zeller, *Richelieu*. (About 1,000 pages.) Open to students who have passed in Course 1 or 2, or have fulfilled the admission requirements in Elementary French. Three hours.

6. General survey of French literature, seventeenth to nineteenth centuries; Warren's French Prose of the Seventeenth Century, Canfield's French Lyrics, Lacombe's *Petite Histoire du peuple française*, Crane's *la Société française au XVIIe siècle*, Corneille, Molière, La Fontaine, Racine, St. Simon, Montesquieu, Marivaux, Voltaire, Buffon, Rousseau, Beaumarchais, Hugo, Musset, Michelet, Balzac, Augier, Maupassant, Pailleuron. (About 1,600 pages.) Translation, analyses of works

read, collateral reading and reports thereon, lectures on literature, philology and history. Composition. Grandgent's Selections for French Composition. Open to students who have passed in Course 4, or have fulfilled the admission requirements in Advanced French. Three hours.

Second Section. For Undergraduates and Graduates.

21. Seventeenth century literature ; history, philosophy, criticism, memoirs, letters, eloquence, drama, fiction. Descartes, Pascal, La Rochefoucauld, La Bruyère, Boileau, St. Simon, Mme. de Sévigné, Bossuet, Corneille, Racine, Molière, Mme. de La Fayette, etc. (About 2,300 pages.) Translation, collateral reading and reports thereon, lectures on literature and history. Thesis. Open to students who have passed in Course 6. Given in 1904-05. Two hours.

23. Eighteenth century literature ; history, philosophy, criticism, letters, drama, fiction, poetry. Montesquieu, Diderot, Rousseau, Voltaire, Marivaux, Destouches, Beaumarchais, Bernardin de St. Pierre, André Chénier, etc. (About 2,300 pages.) Translation, collateral reading and reports thereon, lectures on literature and history. Thesis. Open to students who have passed in Course 6. Given in 1903-04. Two hours.

25. Nineteenth century literature ; history, philosophy, criticism, memoirs, travels, fiction. Thierry, Michelet, Mignet, Thiers, Taine, Sainte-Beuve, Brunetière, France, Renan, Gautier, Mme. de Staël, Chateaubriand, Dumas père, Hugo, de Vigny, George Sand, Mérimée, Balzac, Flaubert, Daudet, Maupassant, etc. (About 2,400 pages.) Translation, collateral reading and reports thereon, lectures on literature and history. Thesis. Open to students who have passed in Course 6. Two hours.

27. Nineteenth century literature ; drama and lyric poetry. Dumas père, Hugo, de Vigny, de Musset, Ponsard, Scribe, Dumas fils, Augier, Rostand, Lamartine, the Romantic poets, the Parnassians, the Symbolists, etc. (About 1,200 pages.) Translation, collateral reading and reports thereon, lectures. Thesis. Open to students who have passed in Course 6. One hour.

*Third Section. Primarily for Graduates.**

43. Old French and philology. Darmesteter's Historical French Grammar. La Chanson de Roland, etc. One hour.

SPANISH.

First Section. Primarily for Undergraduates.

1. Grammar, composition. Edgren's Elementary Spanish Grammar. Ford's Spanish Composition. Translation and reading of nineteenth century fiction and drama. (500-600 pages.) Not open to first-year students. Open only to students who have had at least one year of French or Latin. Three hours.

3. Translation and reading of nineteenth and seventeenth century works; history, fiction, drama, lyric poetry. (About 1,000 pages.) Lectures on literature and history. Open to students who have passed in Course 1 with at least the grade of C. Given in 1903-04. Two hours.

ITALIAN.

First Section. Primarily for Undergraduates.

1. Grammar, composition. Grandgent's Italian Grammar, Grandgent's Italian Composition. Translation and reading of nineteenth century fiction and drama. (500-600 pages.) Not open to first-year students. Open only to students who have had at least one year of French or Latin. Students may not elect Spanish and Italian in the same year. Given in 1904-05. Two hours.

ZOÖLOGY.

THEODORE NICHOLAS GILL, M. D., Ph. D., LL. D.,
Professor of Zoölogy.

PAUL BARTSCH, M. S., Professor of Zoölogy.

First Section. Primarily for Undergraduates.

1. Elementary Zoölogy. This includes lectures and laboratory work. The lectures in their scope cover all the branches of the animal kingdom, from the unicellular organisms to mammals, and correlated with these lectures is the study and dissection of type specimens in each group. This course is intended to familiarize the student with biological characters, classificatory laws, and the general principles of evolution.

Lecture, one hour; laboratory, one two-hour period.

Second Section. For Undergraduates and Graduates.

20. Advanced Zoölogy. Continuation of the work mapped out in Course 1, special attention being given to comparative morphology and histology of animal tissues.

Lecture, one hour; laboratory, one two-hour period.

21. Ornithology. In this course special attention is directed to the study of the birds of the District of Columbia. Frequent field excursions are made to familiarize the student with the haunts and habits of these forms.

Lecture, one hour; laboratory, one two-hour period.

Special courses for teachers in the public schools and others desiring to take up special or advanced lines of work may be arranged upon consultation with the professor.

The collections of the United States National Museum and the Smithsonian Institution are consulted in connection with all these courses.

Third Section. Primarily for Graduates.

40. A general course of lectures on the Principles of Zoölogy, including a consideration of the philosophy, the methods of investigation, and the systems of zoölogy as determined by comparative anatomy. The lectures are supplemented by work in the laboratory, embracing histology, microtomy, and dissection.

COURSES IN MEDICINE AND LAW.

Certain courses in the Departments of Medicine, Law, Jurisprudence, and Diplomacy are open to students in the Department of Arts and Sciences. In general the courses may be taken during the last year of undergraduate work and during the years of graduate work, but the number of courses in these departments to be taken by any student will be limited and the courses must be properly related to his principal subjects of study for his degree.

Such courses may be elected from the following subjects in the Department of Medicine:

Anatomy,
Neurology,
Bacteriology,

Bio-Chemistry and Physiologic Chemistry,
Histology,
Hygiene,
Pathology,
Physiology.

Descriptions of the courses in these subjects are to be found in the announcements of the Department of Medicine.

Such courses may be elected, also, from the following subjects in the Departments of Law, and of Jurisprudence and Diplomacy:

History of the Common Law,
Ancient and Roman Law,
Mediaeval and Modern Civil Law,
Constitutional Law,
International Law,
European Diplomacy and Treaties.
Diplomacy and Treaties of the United States,
Statistics and Social Economics,
Comparative Politics.

Descriptions of the courses in these subjects are to be found in the announcements of the Departments of Law, and of Jurisprudence and Diplomacy.

ADMISSION.

The session of 1903-1904 begins Wednesday, September 30, 1903.

The Department of Arts and Sciences is open to young men and young women.

The main building of the University, in which most of the courses of study in this Department are conducted, is University Hall, corner Fifteenth and H streets, N. W.

Every applicant for admission is required to present a testimonial of good moral character, and also a certificate of standing and regular dismissal from the school or college which he has attended or from the tutor with whom he has studied.

The general requirement for admission is a four-year High School course, or its equivalent, consisting usually of four or five recitations per week in four or more topics. The High School studies which may be presented in satisfaction of the

requirements of admission are given in the adjoining table, the unit being four or five recitations per week for one school year. The figures show the relative value of each subject. The list is substantially that set forth in Document No. 8 of the College Entrance Examination Board.

LIST OF PREPARATORY SUBJECTS FOR EXAMINATION.

	Units.		Units.
English	4	History :	
Latin :		Ancient	1
Elementary	2	Mediaeval and Mod-	
Intermediate	1	ern	1
Advanced	1	English	1
Greek :		American	1
Elementary	2	Mathematics :	
Advanced	1	Elementary Algebra .	1
French :		Advanced Algebra .	$\frac{1}{2}$
Elementary	2	Plane Geometry . . .	1
Intermediate	1	Solid Geometry . . .	$\frac{1}{2}$
Advanced	1	Plane Trigonometry .	$\frac{1}{2}$
Spanish	2	Physics	1
German :		Chemistry	1
Elementary	2	Botany	1
Intermediate	1	Zoölogy	1
Advanced	1	Physiography	1
		Drawing	1

TERMS OF ADMISSION TO BACHELOR OF ARTS COURSES.

Candidates for admission to the courses leading to the degree of Bachelor of Arts are required to present subjects from the list of High School studies aggregating fifteen units, distributed as follows :

	Units.
English	4
Latin	4
Greek <i>or</i>	
French and German <i>or</i>	
French <i>or</i> German	3
Elementary Algebra	
Plane Geometry	1
Electives	2
	<hr/>
	15

TERMS OF ADMISSION TO BACHELOR OF SCIENCE COURSES.

Candidates for admission to the courses leading to the degree of Bachelor of Science are required to present subjects from the list of High School studies aggregating fifteen units, distributed as follows :

	Units.
English	4
French or German	2
Elementary Algebra	1
Plane Geometry	1
Physics	1
Chemistry	1
Electives	5
	<hr/>
	15

EXAMINATIONS FOR ADMISSION.

The regular examination for admission to the First-year Class is held in University Hall, southeast corner of Fifteenth and H streets, N. W., in May. A second examination is held at the beginning of the college year, in September. The following is the schedule for both examinations :

May 30 and September 26, 1903.

Registration of applicants	8.30- 9.00
Latin	9.00-11.00
Plane Geometry	11.00- 1.00
Elementary Algebra	2.00- 4.00

June 1 and September 28.

Greek ; Physics ; Chemistry ; Advanced	
French or German	9.00-11.00
History	11.00- 1.00
German	2.00- 4.00

June 2 and September 29.

Plane Trigonometry	9.00-11.00
French	11.00- 1.00
English	2.00- 4.00

June 3 and September 30.

Advanced Algebra	9.00-11.00
Solid Geometry	11.00- 1.00

The University is prepared to appoint examinations in any city, or at any school where the number of applicants or the distance from Washington may warrant it. Correspondence on this subject should be addressed to the Corresponding Secretary of the University.

Unless admitted by certificate, every undergraduate candidate for a degree is required to pass an examination.

DEFINITION OF REQUIREMENTS.

ENGLISH.

(Counting four units.)

Candidates are expected to be familiar with the elements of rhetoric, and no candidate will be accepted whose work is obviously defective in spelling, punctuation, idiom, or division into paragraphs.

The examination in English consists of two parts, one to test general reading, the other to show the results of more careful study and practice.

1. *Reading and Practice.* The candidate will be required to write a paragraph or two on each of several topics chosen by him from a considerable number—perhaps ten or fifteen—set before him in the examination paper. The candidate should read all the prescribed books, but knowledge of them will be regarded as less important than ability to write good English.

The books set for this part of the examination are :

1903 to 1905 : Shakespeare's Merchant of Venice and Julius Cæsar ; The Sir Roger de Coverley Papers in the Spectator ; Goldsmith's The Vicar of Wakefield ; Coleridge's The Rime of the Ancient Mariner ; Scott's Ivanhoe ; Carlyle's Essay on Burns ; Tennyson's The Princess ; Lowell's The Vision of Sir Launfal ; George Eliot's Silas Marner.

2. *Study and Practice.* This part of the examination presupposes the thorough study of each of the works named. It involves knowledge of the subject-matter, literary form, literary history, grammatical and logical structure.

The books set for this part of the examination are :

1903 to 1905 : Shakespeare's Macbeth ; Milton's L' Allegro, Il Penseroso, Comus, and Lycidas ; Burke's Speech on Con-

ciliation with America; Macaulay's Essays on Milton and Addison.

LATIN.

The minimum requirements in Latin and Greek are in substantial agreement with those set forth in Document 8 of the College Entrance Examination Board, which carry out the recommendations of the Committee of Twelve of the American Philological Association:

The Elementary Requirement (counting two units).

- a. i.* Latin Grammar: The inflections; the simpler rules for composition and derivation of words; syntax of cases and the verbs; structure of sentences in general, with particular regard to relative and conditional sentences, indirect discourse, and the subjunctive; so much prosody as relates to accent, versification in general, and dactylic hexameter.
- ii.* Latin Prose Composition: Translation into Latin of detached sentences and easy continuous prose based upon Cæsar.
- b.* Cæsar: Any four books of the Gallic War, preferably the first four, or their equivalent.

*The Advanced Requirement** (counting two units).

- a.* Cicero: Any six orations from the following list, but preferably the first six mentioned:
The four orations against Catiline, Archias, the Manilian Law, Marcellus, Roscius, Milo, Sestius, Ligarius, the Fourteenth Philippic.
- b.* Vergil: The first six books of the *Æneid*.
- c.* Advanced Prose Composition, consisting of continuous prose of moderate difficulty based on Cicero.
- d.* Sight Translation, based on prose of no greater difficulty than the easier portions of Cicero's orations.

GREEK.

The Elementary Requirement (counting two units).

- a. i.* Greek Grammar: The topics for the examination in Greek grammar are similar to those detailed under Latin grammar.

* This may be divided into *a*, Intermediate; *b*, Advanced, requirements at the convenience of candidates, each counting one unit.

- ii. Greek Prose Composition, consisting principally of detached sentences to test the candidate's knowledge of grammatical constructions.

The examination in grammar and prose composition will be based on the first two books of Xenophon's *Anabasis*.

- b. Xenophon : The first four books of the *Anabasis*.

The Advanced Requirement (counting one unit).

- a. Homer : The first three books of the *Iliad* (omitting II, 494, to end).
b. Sight Translation, based on prose of no greater difficulty than Xenophon's *Anabasis*.

FRENCH.

Elementary (counting two units). Candidates in Elementary French must have a good knowledge of the essential parts of grammar, with stress on pronouns and on regular verbs and the common irregular verbs. They must know the principles of pronunciation; must be able to translate simple English sentences or easy connected prose into French, and to translate accurately ordinary modern French prose. Candidates must have translated not less than 450 duodecimo pages by at least four different authors, of which amount at least one-third must be history. Candidates must have had a two-years' course of at least four periods per week.

Intermediate (counting one unit). Candidates in Intermediate French must have, in addition, a good knowledge of the remaining grammatical forms and of syntactical difficulties. They must be able to translate ordinary connected English prose into French, and to translate accurately and idiomatically difficult modern French. Candidates must have partly translated, partly read, in addition to the requirements for Elementary French, at least 500 pages of several different authors, including history, fiction, drama, and some poetry. Candidates must have had a three-years' course of at least four periods per week.

Advanced (counting one unit). Candidates in Advanced French must have partly translated, partly read, in addition to the requirements for Intermediate French, at least 600 pages of difficult French of several different authors, including his-

tory, fiction, drama, and poetry. Candidates must have had a four-years' course of at least four periods per week.

Fraser and Squair's French Grammar or Grandgent's Essentials of French Grammar is recommended.

SPANISH.

(Counting two units.)

Candidates in Spanish must have a good knowledge of grammar, including syntax, with stress on pronouns and verbs, regular and irregular. They must know the principles of pronunciation. They must be able to translate simple English sentences or easy connected prose into Spanish, and to translate accurately fairly difficult modern Spanish prose and verse. Candidates must have translated not less than 500 pages by at least four different authors, of which amount at least one-fourth must be history or drama. Candidates must have had a two-years' course of at least four periods per week.

GERMAN.

Elementary (counting two units). Candidates in Elementary German must have had a two-years' course of at least four periods a week. They must be able to read fluently at sight and to translate easy narrative prose and poetry. An accurate knowledge of an elementary German grammar is requisite, to be tested by the translation into German of some fifteen sentences. About 300 pages of graduated narrative prose, one short play, and such poetry as is usually found in a First Reader will be considered an adequate preparation.

Intermediate (counting one unit). Candidates in Intermediate German must have had a three-years' course or its equivalent of four periods a week. Translation at sight from modern German prose. Requirements: Three prose books, preferably such as are given in the Report of the Committee of Twelve of the Modern Language Association; one classical drama, preferably *Wilhelm Tell*; and *Das Lied von der Glocke*; 50 pages of lyric and ballads. German composition and an easy essay in German.

Advanced (counting one unit). Candidates in Advanced German must have had a four-years' course of at least four periods a week. They should be well-trained in the syntactical laws of the language, have read about 500 pages of good literature in prose and poetry, especially dramas by Lessing,

Schiller, Goethe, and studied an elementary history of German literature. German composition should comprise a number of short themes upon assigned historical or literary topics, lives of the authors read, etc.

HISTORY.

Ancient (counting one unit):

- (a) Greek History, through the Roman Conquest; as much as is contained in Myers' History of Greece.
- (b) Roman History; as much as is contained in Allen's History of the Roman People.

Mediæval and Modern European History (counting one unit). As much as is contained in Myers' History of Mediæval and Modern Europe.

English History (counting one unit). As much as is contained in Larned's History of England.

American History (counting one unit). As much as is contained in Fiske's History of the United States.

MATHEMATICS.

Elementary Algebra (counting one unit).

i. Algebra to Quadratics:

The four fundamental operations for rational algebraic expressions, factoring, highest common factor, lowest common multiple, complex fractions, the solution of equations of the first degree containing one or more unknown quantities, radicals, including the extraction of the square root of polynomials and numbers, and fractional and negative exponents.

ii. Quadratics, etc.:

Quadratic equations and equations containing one or more unknown quantities that can be solved by the methods of quadratic equations, problems depending upon such equations, ratio and proportion, and the binomial theorem for positive integral exponents.

iii. Progressions, etc.:

The progressions, the elementary treatment of permutations and combinations, and the use of four and five place tables of logarithms.

Advanced Algebra (counting one unit.)

i. Series, etc. :

Undetermined coefficients, the elementary treatment of infinite series, the binomial theorem for fractional and negative exponents, and the theory of logarithms.

ii. Theory of Equations :

Determinants and the elements of the theory of equations, including Horner's method for solving numerical equations.

Plane Geometry (counting one unit), including the solution of simple original exercises and numerical problems.

Solid Geometry (counting one-half unit), including properties of straight lines and planes, of dihedral and polyhedral angles, of projections, of polyhedrons, including prisms, pyramids, and the regular solids ; of cylinders, cones, and spheres ; of spherical triangles and the measurement of surfaces and solids.

Plane Trigonometry (counting one-half unit), including the definitions and relations of the six trigonometrical functions as ratios, proof of important formulæ, theory of logarithms and use of tables, solution of right and oblique plane triangles.

PHYSICS.

(Counting one unit.)

It is recommended that the candidate's preparation should include :

- a. Individual laboratory work, comprising at least thirty-five exercises well distributed over the subjects of physics.
- b. Instruction by lecture-table demonstrations.
- c. The study of at least one standard text-book, supplemented by the use of many and varied numerical problems. The metric system should be familiar to the student.

The laboratory note book must be submitted for inspection, whether the candidate is admitted on certificate or by examination.

CHEMISTRY.

(Counting one unit.)

The candidate's preparation in Chemistry should include—

a. Individual laboratory work, comprising at least forty experiments of a character analogous to those set forth in Document No. 8 of the College Entrance Examination Board.

On application for admission to this University every candidate seeking credit in chemistry must present a note book in which he has recorded the steps and the results of his laboratory exercises. This note book must contain an index to its contents, and must bear an endorsement of the teacher who directed the student, written in ink on the inside of the cover, in the following form :

I certify that this note book is the true and original record of experiments actually performed by _____ in the chemical laboratory of _____ school during the year 19—.

(Signed)

Title _____ [*Instructor*] in Chemistry.

b. Instruction by lecture-table demonstrations to be used in instructing students as to methods of manipulation and as a basis for questioning him upon the general principles involved in his laboratory experiments.

c. The study of at least one modern text-book, to the end that the student may gain a comprehensive and connected view of the most important facts and laws of elementary chemistry.

Requirements. The ground to be covered should include the following : The chief physical and chemical characteristics, the isolation and the recognition of the following elements and the preparation and study of their principal compounds : *Oxygen, hydrogen, carbon, nitrogen, chlorine, bromine, iodine, fluorine, sulphur*, phosphorus, silicon, potassium, *sodium*, calcium, magnesium, *zinc*, copper, mercury, silver, aluminum, *lead*, tin, *iron*, manganese, chromium.

The more detailed study should be confined to the italicized *elements* (as such) and to a restricted list of compounds, such as water, hydrochloric acid, carbon monoxide, carbon dioxide, oxides of nitrogen, nitric acid, ammonia, sulphur dioxide, sulphuric acid, hydrogen sulphide, sodium hydroxide, ammonium hydroxide.

Attention should be given to the atmosphere (constitution and relation to animal and vegetable life), flames, acids, bases,

salts, oxidation and reduction, crystallization, combining proportions by weight and volume, calculations founded on these and on Boyle's and Charles's laws, symbols, formulas, equations and nomenclature, atomic theory, atomic weights, valency (in a very elementary way), nascent state, natural groupings of the elements, solution (solvents and solubility of gases, liquids, and solids), ionization, mass action and equilibrium, strength of acids and bases, conservation and dissipation of energy, chemical energy, electrolysis. Chemical terms should be clearly understood, and the student should be able to illustrate and apply the ideas that they embody. The theoretical topics are not intended to form separate subjects of study, but to be taught only so far as is necessary for the correlation and explanation of the experimental facts. The facts should be given as examples from various classes and not as isolated things.

BOTANY.

(Counting one unit.)

Candidates must have had at least one full year's work in Botany, comprising the General Principles of Morphology, Physiology, and Ecology, as well as in the Natural History of Plant Groups and Classification. Bergen's Foundations of Botany and Atkinson's Elementary Botany indicate the general scope of the work required.

ZOÖLOGY.

(Counting one unit.)

In general, zoölogy is not recommended as an entrance subject unless the study has been preceded or accompanied by that of physics and chemistry, which form the most desirable groundwork for collegiate courses in biology. The entrance examination in zoölogy is designed to test, first, the candidate's practical acquaintance with the natural history, structure, and relationships of some of the leading types of animals, and, second, his knowledge of the more essential facts of physiology.

Practical Zoölogy. A practical examination of at least ten common animal types, and the presentation by the candidate of a laboratory note book, certified by the teacher, as evidence of a laboratory course actually performed. Examples of the types suggested are the frog, fish, mollusk, insects, crustaceans, annelid, starfish, hydroid (hydra), and protozoan. In the examination less weight is laid on a knowledge of anatom-

ical *minutiae* than on the ability to recognize the specimen and its allies, to indicate its relationships, and to point out the leading features of its life history, organization, and physiology.

Elementary Physiology. The nature of foods and their history in the body; the essential facts of digestion, absorption, circulation, secretion, excretion, and respiration; the motor, nervous, and sensory functions, and the structure of the various organs by which these operations are performed. Martin's *Human Body* (briefer course) forms a suitable basis for this work, but teachers are recommended as far as possible to correlate the physiology of man and the higher animals with that of the lower forms studied in the course of practical zoölogy.

PHYSIOGRAPHY.

(Counting one unit).

The equivalent of Davis's *Physical Geography*, together with an approved laboratory and field course of at least forty exercises actually performed by the candidate.

The candidate will be required to present at the time of his examination the original note book in which he recorded, with dates, the steps and results of his laboratory exercises. This book, which should contain an index of subjects, must bear the endorsement of the teacher, certifying that it is a true record of the candidate's work.

DRAWING.

(Counting one unit.)

The candidate's preparation in drawing should include simple geometrical, plane, and solid figures and simple pieces of machinery, with a fair knowledge of the rules of perspective and light and shade as applied in free-hand sketching. The candidate should be able to reproduce from a flat copy with enlargement or reduction of size.

For courses in architecture, the preparation should include, in addition to the above, the drawing of simple pieces of architectural ornament (a Greek anthemium, a design of iron scroll-work, etc.).

For courses in engineering, the preparation should include the copying of machinery details.

For courses in general science or in science for teachers, the preparation should include the copying of still life and simple plant forms.

ADMISSION TO ADVANCED STANDING.

Candidates for admission to advanced classes in any department are examined in all indispensable preliminary studies.

Due credit is given for properly certified courses of study pursued elsewhere.

ADMISSION TO SPECIAL COURSES.

All the courses of instruction are open to students of suitable age and attainments who wish, without reference to any degree, to pursue special studies. Candidates are examined in each special study. They must be familiar with the subjects preliminary to the studies which they wish to pursue.

AUDITORS.

Certain courses are open to the public on payment of an auditor's fee. No auditor will be admitted to a course without the consent of the President's Council previously obtained. Auditors' tickets must be procured of the Registrar and must be shown to the instructor in charge of the course for which they are issued. Auditors are without responsibility for class exercises or examinations, and they will receive no credit on the Secretary's records.

ADMISSION TO COURSES FOR HIGHER DEGREES.

The higher degrees conferred by the University are Master of Arts (A. M.), Master of Science (M. S.), Civil Engineer (C. E.), Electrical Engineer (E. E.), Mechanical Engineer (M. E.), and Doctor of Philosophy (Ph. D.).

DEFINITION OF REQUIREMENTS.

Admission to candidacy for a higher degree will be granted—

1. To holders of the degree of Bachelor of Arts or Bachelor of Science of The Columbian University.
2. To those who hold either of these two degrees from other institutions of good standing or the equivalent of either of these degrees.

Graduates of other institutions desiring to enter The Columbian University for a higher degree must in every case present their diplomas or certificates that they have received such

diplomas, together with catalogues of the institutions from which they hold their degrees and certificates of their courses of study at such institutions. All such applications should be accompanied by testimonials as to character and scholarship.

PROCEDURE FOR ADMISSION.

Candidates for admission to courses for higher degrees, must present the diplomas they hold, or certificates that they have received such diplomas, to the Corresponding Secretary of the University, and obtain from him application blanks. When properly filled and signed, these applications are to be returned to the Secretary, together with a catalogue of the institution from which the candidate received his diplomas, to be submitted to the President's Council for investigation; the applicant will thereupon be informed in writing of the action of the Council. When the applicant is informed that the Council has approved his proposed course of study and has admitted him to candidature for a degree, he should present himself at once to the Registrar and matriculate. He should then present his receipt card and matriculation paper to the Secretary for his signature, and also obtain the signatures upon his matriculation paper of each of the professors with whom he is to study during the year. When this paper has been thus executed the student must sign it and return it to the Registrar.

REQUIREMENTS FOR DEGREES.

UNDERGRADUATE DEGREES.

The undergraduate degrees offered by the University are Bachelor of Arts and Bachelor of Science. To be recommended for either of these degrees, the student must be registered under the Department of Arts and Sciences for at least one academic year, he must satisfy the admission requirements, and must complete the requisite number of undergraduate courses with the requisite grades.

The undergraduate courses leading to the degrees of Bachelor of Arts and Bachelor of Science are arranged especially with the design of giving a systematic discipline in liberal studies or the appropriate foundation for specialized work in the various graduate and professional departments in the University.

To this end the disciplinary methods customary in college teaching are followed in the work of the first two years, or in the completion of two-thirds of the undergraduate requirements, which is designated as the "General Culture" course, while in the third year, or in the pursuit of the last third of the requirements, there is a transition to the university methods pursued in graduate schools.

In fulfillment of this idea, the "group" arrangement of studies has been in general adopted, being the mean between a fixed curriculum and the elective system, as it permits a reasonable liberty of choice, and at the same time preserves the correlation of studies best adapted for giving liberal culture and for gradually leading the student toward the career of specialized study he wishes to pursue.

The courses designed primarily for first and second year students are those numbered from 1 to 19. The courses designed primarily for third-year students are those numbered from 20 to 39.

Students may elect as a part of the work of the third year the first year's work in the Department of Medicine or of Law. For such professional courses students may receive credit for as many units of work, not exceeding ten, as would be granted for the same time in courses under University Subjects.

COURSES OF STUDY LEADING TO THE DEGREE OF BACHELOR OF ARTS.

To be recommended for the degree of Bachelor of Arts, the student must complete courses of study aggregating sixty units. Forty of these units are prescribed studies and twenty are electives. The elective studies may be evenly distributed between Group Electives and Free Electives, as indicated in the following plan:

I. Prescribed Studies	40 units*
II. Group Electives	10 units
III. Electives	10 units

The Prescribed Studies, embraced within the first two years of the curriculum, are arranged in four "groups," each comprising (1) studies required of all Bachelor of Arts undergraduates; (2) studies especially emphasized in each group. The Group Electives consist of optional courses embracing cognate studies, chosen in the third year.

*The unit of credit is one hour of recitation or lecture per week for one academic year. Laboratory hours count one-half unit each.

The courses of study and the schedule are so arranged that all the requirements for the Bachelor of Arts degree may be completed in three years by the attainment of twenty units each year, but in cases where it is necessary or expedient a longer period will be granted for the completion of the course.

The courses of study leading to the degree of Bachelor of Arts are as follows:

GROUP I.

Classical Course.

This is essentially the old College course, with due emphasis on the experimental and social sciences. Stress is laid upon Latin and Greek, each of which is studied two years. This group lays the foundation for graduate courses in philology and literature.

<i>First Year.</i>		<i>Second Year.</i>	
	Units.		Units.
English	3	English	3
Latin	4	Latin	3
Mathematics . . .	3	Greek	3
Greek	4	German or French .	3
French or German .	3	Physics or Chemistry .	5
History	3	Philosophy	3

Third Year.

A. Ten hours preferably from Group Elective 1. (See page 89.)

B. Ten hours of third-year electives.

GROUP II.

Modern Language Course.

This group is designed for students who wish a literary training based upon the modern rather than upon the ancient languages. It differs from Group I in that it omits Greek, devotes more time to English, and emphasizes the study of French and German as factors in a liberal education. If the student has attained proficiency in French he may, in the second year, substitute Spanish or Italian for French. This group lays the foundation for graduate courses in philology and literature.

<i>First Year.</i>		<i>Second Year.</i>	
	Units.		Units.
English	4	English	3
Latin	4	Latin	3
Mathematics	3	Romance Languages	3
French	3	German	3
German	3	Physics or Chemistry	5
History	3	Philosophy	3

Third Year.

A. Ten hours, preferably from Group Elective 1. (See page 89.)

B. Ten hours of third-year electives.

GROUP III.

Historical-Political Course.

This group is designed to give liberal culture, chiefly through attention to the social sciences. It affords a basis for the subsequent study of history, the political and social sciences, or for the profession of law.

<i>First Year.</i>		<i>Second Year.</i>	
	Units.		Units.
English	3	English	3
Latin	4	French or German	3
Mathematics	3	Physics or Chemistry	5
French	3	History	4
German	3	Politics and Economics	2
History	2	Philosophy	3
Politics and Economics	2		

Third Year.

A. Ten hours, preferably from Group Elective 2. (See page 89.)

B. Ten hours of third-year electives.

GROUP IV.

Mathematical-Physical Course.

The chief feature of this group is the predominance given to mathematics and the experimental sciences as elements of general culture. It provides for two years each of mathematics, physics, and chemistry, and differs from the Bachelor of Science

groups in that it prescribes two years of English and one year of Latin. The group affords a satisfactory basis for the subsequent study of the mathematical and physical sciences and for the profession of medicine; and it will appeal especially to scientific students who desire to combine the pursuit of the humanities with that of the sciences.

First Year.

	Units.
English	3
Latin	4
Mathematics	3
French or German	3
Physics or Chemistry	5
History	2

Second Year.

	Units.
English	3
Mathematics	3
French or German	3
Physics and Chemistry	7
Philosophy	3
Politics	1

Third Year.

- A. Ten hours preferably from Group Elective 3 or 4.
B. Ten hours of third-year electives.

Group Electives.

1. Languages—Greek, Latin, Romance, German, English.
2. Philosophy, History, Politics, Economics.
3. Mathematics, Physics, Chemistry, Astronomy.
4. Physics, Chemistry, Geology, Botany, Zoölogy.

COURSES OF STUDY LEADING TO THE DEGREE OF
BACHELOR OF SCIENCE.

To be recommended for the degree of Bachelor of Science, the student must complete courses of study aggregating sixty units. Forty of these units must be selected from courses announced as suitable for first and second year students, and must include the topics named below, and twenty of the units must be selected from courses announced as suitable for third-year students.

Since there are certain options and electives in the studies that may be offered in satisfaction of the admission requirements, there will be corresponding variations in the courses that must be taken by students; but in every case the following subjects must be completed:

	Courses.
English	1 or 2 and 4
Mathematics	1, 3, 5, 7, 9, 10, or 2, 4, 6, 8
French	1, 2
German	1, 2

	Courses.
Chemistry	1 and 2 or 3
Physics	1, 3
Electives :	

Section 1. History, Economics, Philosophy.
One two-hour course.

Section 2. Astronomy, Botany, Geology,
Mineralogy, Meteorology, Zoölogy.
Two two-hour courses.

If any of these topics be presented and accepted in satisfaction of the admission requirements, additional topics must be taken, so that the total work for the degree shall aggregate sixty units, divided, as mentioned above, between the topics open to first and second year students and those open to third-year students.

The courses of study and the schedule are so arranged that all the requirements for the degree may be completed in three years by the attainment of twenty units each year; but in cases where it is expedient or necessary a longer period will be granted for the completion of the course.

If a student elect studies largely in one line of work, a diploma may be issued stating the course for which the degree is given.

The courses of study leading to the degree of Bachelor of Science are as follows :

GROUP I.

General Course.

The studies in this group are required of all candidates for the degree of Bachelor of Science, and are included in each of the succeeding groups. The order of topics will vary somewhat according to the topics offered for admission and according to the subjects that the student plans to elect. In general, the subjects may be distributed as follows :

<i>First Year.</i>		<i>Second Year.</i>	
	Units.		Units.
English	3	Mathematics	3
Mathematics	3	French or German	3
French	3	Electives, Section 1 or	
German	3	Section 2	4
Physics or Chemistry	6	Physics or Chemistry	3
Electives, Section 1 or		Electives	7
Section 2	2		

Third Year.

Twenty hours of third-year electives.

GROUP II.

Civil Engineering.

On the completion of this group the student may be given the degree of Bachelor of Science in Civil Engineering. The completion of this group admits the student to the course leading to the degree of Civil Engineer.

*First Year.**Second Year.*

	Units.		Units.
Mathematics	6	Calculus	3
English	3	Mechanics	3
French or German	3	Hydraulics	1
Freehand Drawing	1	Railroad Engineering	2
Mechanical Drawing	2	Sanitary Engineering	2
Descriptive Geometry	2	Graphic Statics	2
Surveying	2	Physics or Chemistry	3
Materials of Construction	2	French or German	3
		Electives, Section 1 or	
		Section 2	2

Third Year.

	Units.
Hydraulic Engineering	1
Masonry	1
Structures	3
Strength of Materials	2
Metallurgy	1
French or German	3
Physics and Chemistry	6
Electives, Section 1 or Section 2	4

GROUP III.

Electrical Engineering.

On the completion of this group the student may be given the degree of Bachelor of Science in Electrical Engineering. The completion of this group admits the student to the course leading to the degree of Electrical Engineer.

<i>First Year.</i>		<i>Second Year.</i>	
	Units.		Units.
Mathematics	6	Calculus	3
English	3	French	3
French or German	3	German	3
Freehand Drawing	1	Machine Drawing	2
Mechanical Drawing	2	Kinematics	1½
Descriptive Geometry	2	Chemistry	4½
Physics	4½	Electricity, Lectures and Laboratory	6
		Electives, Section 1	2

Third Year.

	Units.
Mechanics	3
Hydraulics	1
Metallurgy	1
Machine design	2
Power plants	2
Strength of materials	2
Electricity, Lectures and Laboratory	8
Electives, Section 2	4

GROUP IV.

Mechanical Engineering.

On the completion of this group the student may be given the degree of Bachelor of Science in Mechanical Engineering. The completion of this group admits the student to the course leading to the degree of Mechanical Engineer.

<i>First Year.</i>		<i>Second Year.</i>	
	Units.		Units.
Mathematics	6	Calculus	3
English	3	French	3
French or German	3	German	3
Freehand Drawing	1	Machine Drawing	2
Mechanical Drawing	2	Kinematics	1½
Descriptive Geometry	2	Chemistry	4½
Physics	4½	Mechanical Engineer- ing	3
		Electives, Section 1	2

Third Year.

	Units.
Mechanics	3
Metallurgy	1
Electives, Section 2	4
Machine Design	2
Mechanical Engineering	15

GROUP V.

Chemistry.

On the completion of this group the student may be given the degree of Bachelor of Science in Chemistry.

First Year.

	Units.
Mathematics	3
English	3
Freehand Drawing	1
Mechanical Drawing	2
Machine Drawing	2
French	3
German	3
Chemistry, Lectures and Laboratory	5

Second Year.

	Units.
Mathematics	3
French or German	3
Physics	5
Chemistry, Lectures and Laboratory	9

Third Year.

Electives, Section 1 or Section 2	6
Chemistry, Lectures and Laboratory	14

GROUP VI.

Architecture.

On the completion of this group the student may be given the degree of Bachelor of Science in Architecture.

First Year.

	Units.
Mathematics	3
English	3
French	3
German	3
Electives, Section 2	2
Mechanical Drawing	2
Descriptive Geometry	2
Architecture	4

Second Year.

	Units.
Mathematics	3
French or German	3
Physics }	9
Chemistry }	
Electives, Section 1	2
Architecture	8

Third Year.

	Units.
Calculus	3
Strength of Materials	2
Mechanics	3
Metallurgy	1
Electives, Section 2	2
Graphic Statics	2
Architecture	12

GROUP VII.

Libraries and Archives.

On the completion of this group the student may be given the degree of Bachelor of Science in Libraries and Archives.

First Year.

	Units.
Mathematics	3
English	4
French	3
German	3
Physics or Chemistry	3
History	3
Electives, Section 2	2

Second Year.

	Units.
Mathematics	3
English	5
French	3
German	3
Physics or Chemistry	3
Libraries and Archives	5

Third Year.

	Units.
English	2
French or German	3
Libraries and Archives	5
Spanish or Italian	3
Physics or Chemistry	3
Economics or Philosophy	2
History	3
Electives, Section 2	2

UNDERGRADUATE AND PROFESSIONAL COURSES.

Students in the last year of their undergraduate course may take as part of their elective the first year's work in the Department of Medicine or of Law, and may receive credit for as many units of work, not exceeding ten, as would be granted for the same time in courses under University Subjects.

HIGHER DEGREES.

DEGREE OF MASTER OF ARTS.

In every case the degree of Bachelor of Arts from an institution of learning whose degrees are recognized by the University or the equivalent of this degree will be required. Moreover, the courses of study pursued for this degree must be approved by the University Council as qualifying the candidate for pursuing a chosen line of study for the Master's degree.

A candidate for this degree shall pass at least one full year of residence and study at this University, and shall sustain satisfactory examinations on the studies pursued and present an acceptable thesis, together with a bibliography.

Three full courses throughout the year shall be the minimum required as constituting a full year's work.

The courses chosen must be passed upon by the President's Council and have the approval of the Professors under whom they are to be taken.

These courses may consist of special study or research work. In any case they must form a consistent plan of work, for which the candidate's previous work has qualified him.

No work done for a Bachelor's degree shall be counted again for a Master's degree.

Theses must be presented not later than May 1.

DEGREE OF MASTER OF SCIENCE.

In every case the degree of Bachelor of Science from an institution of learning whose degrees are recognized by the University, or the equivalent of this degree, will be required. Moreover, the courses of study pursued for this degree must be approved by the University Council as qualifying the candidate for pursuing a chosen line of study for the Master's degree.

A candidate for this degree shall pass at least one full year of residence and study at this University, and shall sustain satisfactory examinations on the studies pursued and present an acceptable thesis, together with a bibliography.

Three full courses throughout the year shall be the minimum required as constituting a full year's work.

The courses chosen must be passed upon by the President's Council and have the approval of the Professors under whom they are to be taken.

These courses may consist of special study or research work. In any case they must form a consistent plan of work, for which the candidate's previous work has qualified him.

No work done for a Bachelor's degree shall be counted again for a Master's degree.

Theses must be presented not later than May 1.

DEGREES IN ENGINEERING.

In every case the degree of Bachelor of Science, or the equivalent of this degree, will be required. Moreover, the courses of study pursued for the Bachelor's degree must be approved by the University Council as qualifying the candidate for pursuing the chosen line of study for the degree.

A candidate for a degree in Engineering shall pass at least one full year of residence and study at this University, and shall sustain satisfactory examinations on the studies pursued and present an acceptable thesis, together with a bibliography.

Three full courses will be the minimum required as constituting a full year's work. At least one-half of this work must be in the course in which the degree is sought and the balance in correlated courses. The courses chosen must be passed upon by the President's Council and have the approval of the professors under whom they are to be taken.

Theses must be presented not later than May 1.

DEGREE OF DOCTOR OF PHILOSOPHY.

GENERAL STATEMENT.—The degree of Doctor of Philosophy is conferred upon students who have pursued specialized courses in university subjects and engaged in original research in certain of the various departments of letters or science, under university auspices, for a period of not less than three years, and have submitted an acceptable thesis and met all the requirements prescribed. The degree is given, however, not because of the faithful completion of a course of study according to a stated program for a given length of time, but for high attainments and approved ability to do research work in some special branch of knowledge, as determined by the various tests applied.

ELIGIBILITY OF THE CANDIDATE.—A candidate for the degree must hold a bachelor's or master's degree, as offered by colleges of approved standing, in arts, philosophy, or science, or an engineering degree, or an equivalent of one of these. The student may be credited with graduate work done at other universities, provided that such work is shown to be of

grade similar to that required here, but at least one year must be spent in residence at this University and the other requirements of the degree as prescribed here must be fulfilled.

REQUIREMENTS FOR THE DEGREE.—Candidates for the degree of Doctor of Philosophy shall offer themselves in three topics of University Subjects—one major and two collateral minor studies—the combination to be approved by the President's Council. These must be pursued under the guidance of a sub-committee consisting of the professors in charge of the departments in which studies are pursued, with the professor in the major subject as chairman. This sub-committee, in charge of the candidate, shall determine his division of time, study, and research among the major and minor topics, but in general the major topic should be pursued during the whole time devoted to graduate work, and each minor topic during at least one year.

The candidate shall pass satisfactory written examinations upon the three subjects selected. The examinations in the minor topics may be taken at the completion of the courses pursued or at the discretion of the professor in charge. In written examinations the time limit is four hours for the major and three hours for the minor topics.

The candidate must show that he possesses a reading knowledge of French and German, as evinced by familiarity with philological or scientific monographs pertaining to his special branches of study. The head professor of a subject may require such knowledge of other subjects as is considered fundamental.

The candidate must present a satisfactory thesis, together with an exhaustive bibliography, exhibiting independent research in some branch of his major subject, under the following regulations:

REGULATIONS REGARDING THESES. Theses must be presented not later than May 1 of the year in which the degree is sought. After their acceptance, theses, with their accompanying drawings, are the property of the University, and must be deposited in the University archives, but authors are permitted to make copies.

No thesis for the degree of Doctor of Philosophy shall be submitted to the University Council until it has been approved by the professor having supervision of the major topic, and also by a co-referee to be appointed by the President's Council. The referees shall present to the Council written reports on the thesis to be filed therewith.

The candidate is expected to print his thesis, under the supervision of the professor in charge of his major topic, within one year after the degree is conferred, and shall present one hundred copies to the University, to be distributed among institutions of learning.

The candidate must defend his thesis and submit to an oral examination upon his major topic before a board of experts consisting of three specialists of university standing and established reputation in the subject represented by the principal topic, to be appointed by the President's Council.

DOCTORATE DISPUTATION.

A Doctorate Disputation was held publicly in University Hall May 26, 1902. The theses that were successfully defended, the candidates, and the boards of examiners were as follows:

Thesis: Did the Semites pass through a totem stage?

Candidate: Rev. FRANK LEIGHTON DAY, A. B., M. A.
(Roanoke College), B. D. (Vanderbilt University).

Board: Prof. GEORGE L. RAYMOND, L. H. D.
W. H. HOLMES, B. S.
I. M. CASANOWICZ, Ph. D.

Prof. EDWARD FARQUHAR, Ph. D., presiding.

Thesis: Some experiments on electrolytic conduction with reference to the Ion theory.

Candidate: NEVIL MONROE HOPKINS, B. S., M. S. (The
Columbian University).

Board: SAMUEL W. STRATTON, Ph. D.
Prof. ROBERT B. WARDER, S. B.
ARTHUR L. DAY, Ph. D.

Prof. FRANK WIGGLESWORTH CLARKE, Sc. D.,
presiding.

PRIZES.

STAUGHTON AND ELTON PRIZES.—The Staughton Prize, for excellence in the Latin Language and Literature, and the Elton Prize, for excellence in the Greek Language and Literature, founded by the Rev. Romeo Elton, D. D., of Exeter, England, consist of two gold medals, annually awarded to the best scholar in each of these languages.

RUGGLES PRIZES.—The Ruggles Prizes, for excellence in Mathematics, founded by Professor William Ruggles, LL. D., consist of two gold medals, annually awarded to the best two scholars in Pure and Applied Mathematics.

MUNROE PRIZE.—Professor Munroe offers a gold medal to that student from any Washington High School or the Manual Training School who shall attain the highest mark in Chemistry among those passing the entrance examinations, and shall remain in regular attendance for one year.

CLASS OF '96 JAMES MACBRIDE STERRETT, JR., MEMORIAL MEDAL.—This prize is annually awarded to that student taking Course 1 in Physics who obtains the highest average in a special examination on a given subject and in the writing of an essay on an assigned topic. Only candidates for degrees may compete for this prize.

DAVIS PRIZES.—The Davis Prizes, for excellence in Composition and Elocution, founded by the Hon. Isaac Davis, LL. D., of Massachusetts, consist of two gold medals, annually awarded to the two successful competitors in a public contest. Members of the graduating class are eligible to compete for these prizes.

DAUGHTERS OF THE AMERICAN REVOLUTION PRIZES.—These prizes, founded by the Daughters of the American Revolution of the District of Columbia, consist of two gold medals, awarded annually to the two students in the graduating class who, having maintained a high standing in the regular courses in History during three years, shall produce the best essays upon an assigned topic of American history.

THOMAS F. WALSH PRIZE IN IRISH HISTORY.—This prize is a gold medal, awarded to that student in the graduating class who, having maintained a high standard in the regular courses of History, shall produce the best essay based upon the study of some period of Irish history.

E. K. CUTTER PRIZE.—The E. K. Cutter Prize in English was founded by the late Marion Kendall Cutter. The endowment is a fund of one thousand dollars, the income of which is given annually as a prize "for excellence in the study of English." The prize will be awarded to that member of the graduating class whose record in English, combined with general excellence, shows most marked aptitude and attainment in English studies.

WILLIE E. FITCH PRIZE.—The Willie E. Fitch Prize, for highest excellence in all branches of Chemistry, founded by James E. Fitch, Esq., in memory of his son, consists of fifty dollars, which is awarded annually for the best examination in Chemistry.

SCHMIDT PRIZE.—This prize was established by Mr. Fred. A. Schmidt, of Washington, in 1894, and is to hold good for a period of ten years. The prize consists of a pocket case of the finest Drawing Instruments. All students in full standing in the second year taking a full course in one of the departments of Architecture, Civil Engineering, Electrical Engineering, or Mechanical Engineering are considered applicants without further notice. The prize will be awarded to that student passing highest in Descriptive Geometry and in Trigonometry and Analytic Geometry. Descriptive Geometry plates to count seventy-five (75) per centum, and twenty-five (25) per centum to be evenly distributed between the yearly examinations in Descriptive Geometry and the mathematical studies.

AMATEIS MEDAL.—Professor Louis Amateis offers a gold medal, to be given to the student who, graduating with the degree of Bachelor of Science in Architecture, obtains the highest relative standing in Fine Arts as applied to Architecture, Building Construction, and in Architecture.

MUTH PRIZE.—Geo. F. Muth & Co. offer a set of Drawing Instruments to the full-course student taking Machine Drawing who makes the highest average record in that subject and in the previous year's Mechanical Drawing.

PRIZE AWARDS, 1902.

Staughton Prize	Bertha Winifred Clark.
Elton Prize	M. Elsie Turner.
Ruggles Prize	Herbert Louis Solyom.
Class of '96 James Macbride Sterrett, Jr., Memorial Medal . .	Raymond Outwater.

Davis Prizes	{ Paul Sperry.
	{ Lola May Evans.
Daughters of the American Revolution Prizes	{ Lucina Frances McGroarty.
	{ Josephine P. Shallenberger.
Thomas F. Walsh Prize	Lola May Evans.
Schmidt Prize	Will Chester Thom.
Muth Prize	Wallace E. Mattingly.
Gore Prize in Parliamentary Law.	Herbert Louis Solyom.
Debaters' Prize	Bertha Winifred Clark.

SCHOLARSHIPS.

All scholarships except the Kendall Scholarship and the University Scholarship are awarded for one year only, but they may be renewed. Students holding scholarships pay the matriculation fee. Applications for scholarships should be filed with the Corresponding Secretary of the University not later than September 15th.

KENDALL SCHOLARSHIP.—The Kendall Scholarship, founded by the late Hon. Amos Kendall, is annually conferred on that student from any of the Washington High Schools or from the Manual Training School who attains the highest average in the May entrance examinations. This scholarship continues throughout the undergraduate course.

UNIVERSITY SCHOLARSHIPS.—The University offers also six scholarships, each continuing throughout the undergraduate course, to be awarded annually to members of the graduating classes of the High Schools of Washington and of the Manual Training School. The scholarships will be divided among the several schools in proportion to the number of students in attendance upon each. Three scholarships are offered to young men and three to young women. No scholarship will be awarded to a candidate whose examination average is below 80 per cent. Candidates for these scholarships will take the May entrance examinations for the undergraduate course leading to the degree of Bachelor of Arts or the degree of Bachelor of Sciences, as they shall elect, and on the results of these examinations the scholarships will be assigned. Holders of these scholarships will be expected to pursue a regular course, classical or scientific, leading to a degree.

MARY LOWELL STONE SCHOLARSHIP.—This scholarship was founded by a woman in memory of a woman student of science. It consists of a fund of two thousand dollars, the income from

which is to be paid to needy women students of science in the University ; it will be awarded by the President's Council.

CARTER SCHOLARSHIPS.—The Carter Scholarships, founded by Mrs. Mary M. Carter in memory of her husband, Henry Harding Carter, consist of five scholarships of the annual value of fifty dollars each, and may be awarded to deserving students who are preparing for the civil engineering profession.

POWELL SCHOLARSHIPS.—The Powell Scholarships were founded by the late Admiral Powell, U. S. Navy. The income from this endowment is for "the free education of such young men as may desire to take advantage of the said endowment by way of their preparation for entrance into the Naval Academy at Annapolis, Maryland, or such as may fit them to become mates or masters in the Merchant Marine Service of the United States," and of "such apprentices as, having filled their time in the great steam manufactory establishments of the country, may apply for appointment from civil life in the Steam Engineer Department of the United States Navy." The number of scholarships awarded each year will be determined by the income from the endowment. Each scholarship will entitle the beneficiary to free tuition for one year. Such special courses of study are offered to each student as will give him the instruction needed to accomplish the purpose for which he is awarded the scholarship.

FINAL EXAMINATIONS.

Examinations are conducted under the following rules of the Board of Trustees:

Examinations for degrees shall close at least three weeks before the end of the scholastic year, and the names of all candidates for degrees who have passed a successful examination shall be officially reported to the President at least two weeks before the date of the commencement.

No student shall be admitted to an examination for promotion from a lower to a higher class or to a final examination who is in arrears for tuition and whose name has not been certified by the Registrar to the professors proposing to hold an examination.

Professors and instructors will require students entering such examinations to present their cards of admission from the Registrar before permitting them to be examined.

ANNUAL COMMENCEMENT.

The Annual Commencement is held on the Wednesday nearest the first of June.

All the degrees are publicly conferred on Commencement Day.

Candidates for degrees are expected to appear at the Commencement in academic caps and gowns.

Prizes for special excellence in any department are publicly delivered on the same day.

PUBLIC WORSHIP.

Brief devotional exercises are held in the Hall of the University on every week day except Saturday, at 9 o'clock a. m. All students are invited to attend these services.

LIBRARY FACILITIES.

A well-equipped reference library and reading-room is open to students from 9.15 a. m. to 10 p. m. It contains encyclopædias, dictionaries, standard works in the various departments of study comprised under University Subjects, and the leading literary and scientific magazines and reviews. Valuable accessions have recently been made, largely through the liberality of the Columbian Women, and new books are constantly being added. The Librarian is in attendance to give help in any line of reading or research, and to refer the student to the larger libraries of the city best adapted to his purpose.

The great Library of Congress—the largest in the country—is steadily perfecting its collections of standard works in the various branches of university study, and advanced and graduate students are there given every facility for pursuing their investigations. The Public Library of the District of Columbia is being rapidly equipped with books of especial importance to students of high schools and colleges, and its facilities are available under the most favorable conditions. Under certain restrictions, the libraries of the governmental departments may also be utilized. All these libraries are within easy reach of the University.

MECHANICAL AND ELECTRICAL ENGINEERING LABORATORY.

The Mechanical Engineering department is provided with a valuable collection of machine parts, illustrating the best

modern practice, such as shaft-hangers, pedestals, valves, jacks, friction clutches, &c.

Arrangements are being made to provide the necessary additional testing machines and instruments to give a laboratory course in engineering practice. The lighting and heating plant now installed in University Hall forms an excellent basis for such work.

A 25 K. W. direct-current Westinghouse dynamo, directly connected to a Westinghouse gas engine of the latest type, has been installed. The dynamo was specially constructed to adapt it to experimental requirements, generating both direct and polyphase alternating currents. The surplus power of the Westinghouse gas engine is utilized in driving smaller dynamos of various types for testing purposes.

The engine is one of the latest and most improved types of gas engines, being a two-cylinder single-acting engine, giving an explosion every revolution, and an exceptionally close regulation. Provision is made for testing the efficiency of each machine independently, or the combined unit under a great variety of conditions.

In addition to the above, an experimental electrolytic refining plant has been installed, current for which is furnished by a Crocker & Wheeler motor dynamo, giving 150 amperes at 6 volts. Special investigations in electrometallurgy are in contemplation.

The laboratory is equipped with direct and alternating current generators and motors for experimental purposes, and with the necessary measuring apparatus, direct and alternating current ammeters and voltmeters, galvanometers, standard resistances, standard cells, etc.

DAVIS PRIZE SPEAKING.

The Davis Prize Speaking is held annually in the Hall of the University on the day before the Easter holidays. The Davis Prizes are offered under the following conditions:

The competition is restricted to members of the graduating class pursuing regular courses of study for the bachelor's degree. Two prizes of equal value are offered—one to young men presenting original orations, and one to young women presenting original essays. Students wishing to enter the competition should report to the Head Professor of English not later than five weeks before the contest, and submit their orations or essays not later than three weeks before the contest. The prizes are awarded by a committee consisting of three members—one se-

lected by the President's Council, and one by each of the two classes of contestants.

ENOSINIAN SOCIETY.

The Enosinian Society, a literary association formed by the students of the Department of Arts and Sciences, meets weekly for the purpose of improvement in Debate and Composition. Prizes are given to the two students showing the greatest proficiency in Debate and in Parliamentary Law.

HONORABLE DISMISSION.

An honorable dismission will always be granted to any student in good standing who may desire to withdraw from the University.

Students proposing to withdraw will notify the Registrar to that effect in writing. In the absence of such notification no claims for exemption from fees will be allowed.

ROOMS AND BOARD.

Desirable rooms, convenient to the University buildings, and good board, are obtainable at moderate prices. A list of eligible boarding-houses will, upon request, be furnished by the Registrar of the University.

FEEES.

Matriculation fee (payable but once on entrance) . . .	\$10 00
Tuition per annum for candidates for a degree . . .	100 00
Tuition per annum for one course not exceeding two hours per week	15 00
And for each additional hour	7 50
Auditor's fee per annum for one course not exceeding two hours per week	15 00
And for each additional hour	7 50

Students taking laboratory courses are charged additional laboratory fees as follows :

Laboratory fee per annum—Chemistry—courses 2 or 3	\$10 00
Laboratory fee per annum, for all other laboratory courses in Chemistry	25 00

Deposit (returnable) for breakage in all laboratory courses in Chemistry except 2 and 3	25 00
Laboratory fee, assaying of ores and bullion	\$40 00
Materials used, assaying of ores and bullion	20 00
Laboratory fee per annum, Physics	10 00
" " " Electricity	10 00
" " " Botany	10 00
" " " Zoölogy	10 00
" " " Mineralogy	10 00

In addition to the above laboratory fees students are charged for breakage.

Students taking courses in other departments of the University in which there is a higher fee will be charged the higher fee.

Diploma fee \$10 00

All tuition fees are payable semi-annually, in advance.

LOCATION.

The main building of the University is situated at the corner of Fifteenth and H streets N. W.

For further information in regard to the Department of Arts and Sciences inquiries may be addressed to the

CORRESPONDING SECRETARY,

The Columbian University,

Washington, D. C.

NOTE.—*The names and addresses of students enrolled for the academic year 1902-'03 will be given in the May bulletin.*

Department of Medicine.

FACULTY.

- CHARLES W. NEEDHAM, LL. D.,
President of the University.
- EMIL A. DE SCHWEINITZ, Ph. D., M. D., Dean,
Professor of Chemistry and Toxicology.
- J. FORD THOMPSON, M. D.,
Professor of Surgery and Clinical Professor of Surgery.
- ALBERT F. A. KING, A. M., M. D.,
Professor of Obstetrics and the Diseases of Women and
Children, and Dean Emeritus.
- D. KERFOOT SHUTE, A. B., M. D.,
Professor of Anatomy and Clinical Ophthalmology.
- WILLIAM P. CARR, M. D.,
Professor of Physiology and Professor of Clinical Surgery.
- STERLING RUFFIN, M. D.,
Professor of the Theory and Practice of Medicine and
Professor of Clinical Medicine.
- THOMAS A. CLAYTOR, M. D.,
Professor of Materia Medica and Therapeutics and Profes-
sor of Clinical Medicine.
- H. C. YARROW, M. D.,
Professor of Dermatology and Clinical Dermatology.
- HENRY L. E. JOHNSON, M. D.,
Professor of Gynecology and Professor of Clinical Gynecology.
- THOMAS E. MCARDLE, A. M., M. D.,
Professor of Minor Surgery.
- WILLIAM K. BUTLER, A. M., M. D.,
Professor of Ophthalmology and Clinical Ophthalmology.
- CHARLES W. RICHARDSON, M. D.,
Professor of Laryngology and Otology and Professor of
Clinical Laryngology and Otology.
- * EDMUND L. TOMPKINS, M. D.,
Professor and Clinical Professor of Nervous Diseases.

* On leave of absence.

- A. R. SHANDS, M. D.,
Professor and Clinical Professor of Orthopedic Surgery.
- JOHN VAN RENSSELAER, M. D.,
Professor of Surgical Pathology and Professor of Clinical Surgery.
- W. F. R. PHILLIPS, M. D.,
Professor of Hygiene.
- GEORGE N. ACKER, M. D.,
Professor and Clinical Professor of Pædiatrics and Professor of Clinical Medicine.
- G. WYTHE COOK, M. D.,
Professor of Clinical Medicine.
- J. W. BOVÉE, M. D.,
Professor of Clinical Gynecology.
- RANDOLPH B. CARMICHAEL, M. D.,
Professor of Clinical Dermatology.
- A. B. RICHARDSON, M. D.,
Professor and Clinical Professor of Mental Diseases.
- JULIEN M. CABELL, M. D.,
Clinical Professor of Obstetrics.
- W. C. WOODWARD, M. D., LL. D.,
Professor of Medical Jurisprudence.
- JAMES CARROLL, M. D.,
Associate Professor of Pathology and Bacteriology.
- J. B. NICHOLS, M. D.,
Professor of Normal Histology.
- J. H. FORD, B. S., M. D.,
Professor of Tropical Diseases.
- FRANK HAGNER, M. D.,
Clinical Professor of Genito-Urinary and Venereal Diseases.
- A. L. STAVELEY, M. D.,
Clinical Professor of Gynecology.
- W. I. ROBINS, M. D.,
Acting Professor of Nervous Diseases.

DEMONSTRATORS.

- W. F. R. PHILLIPS, M. D.,
Demonstrator of Anatomy.
- E. G. SEIBERT, M. D.,
Associate in Chemistry in Charge of Chemical Laboratory.

FRANCIS P. MORGAN, A. B., M. D.,
Assistant to the Chair of Materia Medica and Therapeutics,
in Charge of the Pharmacy Laboratory.

L. W. GLAZEBROOK, M. D.,
Curator of the Museum and Demonstrator of Pathological
Anatomy.

D. W. PRENTISS, M. D.,
Demonstrator of Normal Histology.

H. M. BENNETT, M. D., SOTHORAN KKY, M. D.,
THOMAS DOWLING, M. D.,
Assistant Demonstrators of Normal Histology.

VIRGIL B. JACKSON, M. D.,	C. L. FOSTER, M. D.,
GEORGE B. HEINECKE, M. D.,	R. H. FORD, M. D.,
R. WASHINGTON, M. D.,	J. L. RIGGLES, M. D.,
E. E. RICHARDSON, M. D.,	T. B. DIXON, M. D.,
E. P. COPELAND, M. D.,	R. M. LITTLE, M. D.,
C. S. WHITE, M. D.,	A. L. LAWRENCE, M. D.,
H. F. COLLINS, M. D.,	E. Y. GILCHRIST, M. D.,
W. A. FRANKLAND, M. D.,	T. S. D. GRASTY, M. D.,
F. A. MAZZEI, M. D.,	E. C. PRENTISS, M. D.,
S. H. GREENE, JR., M. D.,	

Assistant Demonstrators of Anatomy.

GEORGE B. HEINECKE, M. D., E. E. RICHARDSON, M. D.,
Prosectors to the Chair of Anatomy.

FRANK LEECH, M. D.,
Demonstrator of Minor Surgery.

EDWARD E. MORSE, M. D.,
Demonstrator of Obstetrics.

B. L. HARDIN, M. D.,
Associate in Physical Diagnosis.

W. B. JOHNSTON, M. D.,
Assistant in Physical Diagnosis.

FRANCIS R. HAGNER, M. D.,	H. C. MACATEE, M. D.,
W. B. JOHNSTON, M. D.,	E. L. MASON, M. D.,
C. S. WHITE, M. D.,	

Demonstrators of Pathology.

L. H. REICHELDERFER, M. D., H. C. MACATEE, M. D.,
Instructors in Medicine.

H. S. MEDFORD, M. D.,
Instructor in Obstetrics.

E. P. COPELAND, M. D.,
Instructor in Surgery.

G. BROWN MILLER, M. D.,

Instructor in Gynecology.

C. S. WHITE, M. D.,

Instructor in Physiology.

J. S. RIGGLES, M. D.,

H. M. MANNING, M. D.,

Instructors in Anatomy.

O. A. M. MCKIMMIE, M. D.,

Examiner of Applicants for Matriculation.

THE UNIVERSITY HOSPITAL.

BOARD OF GOVERNORS OF THE UNIVERSITY HOSPITAL.

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THOMAS A. CLAYTOR, M. D.

D. KERFOOT SHUTE, A. B., M. D.

G. WYTHE COOK, M. D.

E. A. DESCHWEINITZ, Ph. D., M. D.

C. W. RICHARDSON, M. D.

WILLIAM P. CARR, M. D.

Mrs. W. H. HOEKE.

HOSPITAL AND DISPENSARY STAFF.

Surgery.

J. FORD THOMPSON, M. D.

Associates: W. P. Carr, M. D., John Van Rensselaer, M. D. Assistants: F. R. Hagner, M. D., V. B. Jackson, M. D., and H. C. Macatee, M. D.

Medicine.

STERLING RUFFIN, M. D.

Associates: Thomas Claytor, M. D., G. N. Acker, M. D., G. Wythe Cook, M. D., and B. L. Hardin, M. D. (in Dispensary). Assistants: Thomas Dowling, M. D., C. S. White, M. D., and E. P. Copeland, M. D.

Obstetrics and Gynecology.

A. F. A. KING, M. D.

Associates in Gynecology: H. L. E. Johnson, M. D., and J. Wesley Bovée, M. D. Assistants: H. S. Medford, M. D., V. B. Jackson, M. D., and C. S. White, M. D. Associate in Obstetrics: E. E. Morse, M. D., Julian Cabell, M. D.

Diseases of the Eye.

D. K. SHUTE, M. D.

Associate: W. K. Butler, M. D. Assistant: E. G. Seibert, M. D.

Diseases of the Throat and Ear.

C. W. RICHARDSON, M. D.

Assistant: F. P. Morgan, M. D.

Diseases of the Skin.

H. C. YARROW, M. D.

Associate: R. B. Carmichael, M. D.

Diseases of Children.

T. E. MCARDLE, M. D.

Assistant: Frank Leech, M. D.

Orthopedic Surgery.

A. R. SHANDS, M. D.

Diseases of the Nervous System.

E. L. TOMPKINS, M. D.

Assistant: A. L. Lawrence, M. D.

Genito-Urinary Diseases.

F. H. HAGNER, M. D.

Assistant: W. T. Burch, M. D.

Clinical Laboratory.

E. A. DE SCHWEINITZ, M. D.

Associates: James E. Carroll, M. D., Pathologist and Bacteriologist; V. B. Nichols, M. D., and W. B. Johnston, M. D., (Hæmatologist). Assistants: D. W. Prentiss, M. D.; H. H. Donnally, and H. C. Coburn.

Pathologist.

JAS. CARROLL, M. D.

Assistant: L. W. Glazebrook, M. D.

Superintendent.

H. C. MACATEE, M. D.

Superintendent of Nurses and Matron.

Miss MINNIE PAXTON.

Resident Physicians.

GEO. M. RUFFIN, M. D.

F. H. POOLE, M. D.

J. D. RODGERS, M. D.

Pharmacist.

C. V. NYMAN, Ph. G.

Externs.

H. H. DONNALLY.

C. W. HYDE.

EDGAR SNOWDEN.

J. G. FISHER.

H. C. COBURN.

COURSES OF INSTRUCTION.

The system of instruction adopted by the Department of Medicine of this University includes lectures on Anatomy, Physiology, Chemistry, Materia Medica and Therapeutics, Surgery, Obstetrics, the Theory and Practice of Medicine, Hygiene, Bacteriology, Otology, Laryngology and Rhinology, Gynecology, Dermatology, Ophthalmology, Mental Diseases, Medical Jurisprudence, Nervous Diseases, Pædiatrics, Minor Surgery, Histology, Pathological Histology, Bacteriology, Orthopedic Surgery, and Surgical Pathology.

Laboratory instruction is given in Chemistry, Histology, and Pathological Histology, Bacteriology, Physiology, Pharmacy, and Clinical Medicine.

The eighty-second course of lectures begins on Thursday, October 1, 1903.

The Introductory Lecture of the Course will be delivered by Professor Thomas A. Claytor, on the first of October, and the regular didactic lectures will continue throughout the session. Two courses of lecture, laboratory, and clinical work will be given during the year, the one beginning daily at 9.30 a. m., the other at 4.30 p. m. The student may select either course. The laboratories and dissecting-room are open at stated hours day and evening. Practical clinics during the day.

SURGERY.

PROFESSOR THOMPSON, Surgeon to the University Hospital, the Children's Hospital, and to the Garfield General Hospital.

The course embraces didactic lectures upon the principles and practice of surgery, and, as far as practicable, clinical instruction in the Department.

As Professor THOMPSON is the attending Surgeon of the University, Children's and Garfield Hospitals, students are offered the opportunity for Clinical Instruction in these Institutions.

Every effort is made to teach Surgery in accordance with the latest developments of scientific research. At the School, operations are performed upon the cadaver, and the uses of all important surgical instruments and appliances are demonstrated in the same manner.

MINOR SURGERY.—Practical class instruction is given by Professor McARDLE and his assistants in the application of splints, dressings, etc., for the various surgical diseases and injuries.

THEORY AND PRACTICE OF MEDICINE.

STERLING RUFFIN, M. D., Physician to the University Hospital and Consulting Physician to St. Elizabeth's Hospital, and to the Central Dispensary and Emergency Hospital.

The student is urged to pay special attention to the course in Histology during the second year, as this is essential to a

proper understanding of the internal diseases of the human body. The courses in Pathology and Bacteriology should also receive the closest study, for without a clear knowledge of these subjects no satisfactory advance can be made.

The method of instruction employed in this subject is as follows:

1. Lectures, with weekly recitations.
2. Clinical lectures at the University Hospital, with practical instruction in the art of diagnosis and in the methods of taking and recording histories of medical cases.
3. Laboratory instruction in the use of instruments of research for the clinical study of the sputum, blood, feces, etc.
4. A course of lectures, with class instruction in physical diagnosis.

OBSTETRICS AND GYNECOLOGY.

PROFESSOR KING, Obstetrician to the University Hospital, One of the Consulting Physicians to the Children's Hospital, Central Dispensary, and Emergency Hospital, etc.

This course comprises a series of lectures on the Science and Art of Midwifery, and on the Diseases of Women. The chief purpose of the lecturer is to arrange, simplify, and explain the matters studied in the text-books, so as to render them more easily intelligible, and to indicate their relative importance. The lectures are illustrated by diagrams, models, manikins, natural preparations, and instruments. The Demonstrator of Obstetrics, Dr. Edward E. Morse, of the Columbia Hospital, demonstrates obstetric operations and allows students to perform these operations upon the manikin, under his direction. This course is limited to fourth-year students, and all are required to take it before becoming candidates for graduation.

In the Department of Gynecology the various instruments and appliances used in treating the diseases of women are exhibited and their uses fully explained. Clinical instruction in Surgical Gynecology will be given by Prof. H. L. E. Johnson at the hospitals, where students will witness the various surgical operations required in gynecological cases.

Clinical Instruction in Obstetrics will be given by Dr. Cabell at the Columbia Hospital.

ANATOMY.

PROFESSOR SHUTE, Ophthalmic Surgeon to the University Hospital and to the Washington Hospital for Foundlings.

This course of lectures is arranged with the view of rendering the didactic instruction in Anatomy as full and complete as possible.

The lectures are illustrated by frequent reference to recent dissections and numerous drawings and diagrams. The sci-opticon is also employed constantly to present photographic views of many regions of the body.

Special attention is given during the course to the surgical and medical relations of human anatomy, which are of so great importance in the practice of the medical profession.

Public oral examinations are conducted by the lecturer from time to time.

The prosectors prepare the subject for the lecturer.

The Demonstrator of Anatomy and his assistants give their personal attention to the students in the dissecting-room.

PRACTICAL ANATOMY.—Anatomical material is abundantly supplied. The dissecting-room is large, thoroughly ventilated, well lighted, and furnished with every requisite for the convenience and comfort of the student. It is under the direction of the Professor of Anatomy. The Demonstrator of Anatomy and his assistants are present at stated hours to give personal attention to the students and to instruct them properly in their dissections.

GRADUATE COURSE IN NEUROLOGY.—This course includes laboratory work, readings, and recitations. The nervous system is investigated in typical animals of the different classes, especially with the view of gaining some insight into the phylogeny of the Central Nervous System in Man. The growth of the brain and its physical characters as related to intelligence are investigated. The histology and embryology of the Central Nervous System and the Sense Organs are studied. A history of the guiding conceptions in Neurology is to be acquired. The course is designed to inculcate a sound knowledge of the architecture and functions of the Nervous System of Man for the use of students of Anatomy, Medicine, and Psychology.

CHEMISTRY AND TOXICOLOGY.

PROFESSOR DE SCHWEINITZ, in charge of Clinical Laboratory, University Hospital, and Director of the Biochemic Laboratory, B. A. I., Department of Agriculture.

This course embraces :

A short discussion of the principles of physics in their relation to chemistry, the principles of chemical philosophy, the laws of chemical combination and affinity.

The elements, metals and non-metals; their methods of isolation, properties, compounds, and reactions, are studied.

Due attention is given to organic chemistry, especially those compounds that are of use in medicine.

Laboratory instruction, in charge of the Professor of Chemistry and associate, Dr. E. G. Seibert, is given in the general methods of qualitative and quantitative analysis, volumetric analysis, toxicology, urine analysis, water analysis, and special clinical analyses.

GRADUATE COURSE IN BIO-CHEMISTRY.

This course embraces, in addition to what is ordinarily called physiological chemistry, the following subjects :

a. A study of the products of the growth of germs, either in the animal body or upon artificial media.

b. The influence of these substances in causing disease and their relation to immunity.

c. The anti-toxins and methods of their preparation, hæmolysins, præcipitines, etc.

PHYSIOLOGY.

PROFESSOR CARR, Associate Surgeon to the University Hospital and Surgeon to the Central Dispensary and Emergency Hospital.

This subject is fully presented in a graded course of lectures covering the first two years.

The lectures are well illustrated by diagrams, models, and anatomical specimens, so as to make them clear in every detail.

A new physiological laboratory is ready for use during the session of 1903-04, where students will be required to do practical work during the first and second years. This work will be in sections, and opportunity will also be given to advanced students for original research.

MATERIA MEDICA AND THERAPEUTICS.

PROFESSOR CLAYTOR, Visiting Physician to Garfield Hospital, Associate in Medicine, University Hospital.

Instruction in this department extends through the first three years, and embraces:

1. The study of crude drugs and their preparations, and the art of prescribing.
2. The physiological action of drugs in the human system.
3. The practical application of drugs and other therapeutical agencies to the prevention and cure of disease and the relief of suffering, together with their antidotal relations to poisons.

The subject is taught by means of lectures, recitations, and blackboard illustrations, and is simplified and made practical to as great a degree as is compatible with a sufficiently thorough understanding of its principles.

In connection with this chair is a pharmaceutical laboratory, under the immediate supervision of Dr. F. P. Morgan, well equipped with modern appliances, in which are taught the making of typical preparations of the Pharmacopœia, prescription writing, and the compounding of prescriptions. Practical instruction is also given in Electro-Therapeutics.

DERMATOLOGY.

PROFESSOR YARROW, Dermatologist to the University Hospital and one of the Consulting Physicians to the Garfield Hospital, Children's Hospital, and Woman's Clinic.

Professor Yarrow gives lectures on this subject, illustrated by diagrams, models, photographic illustrations of disease from life, and also the exhibition of cases. In connection with the course, clinical instruction is given at the Central Dispensary and Emergency Hospital and the University Hospital by Dr. Carmichael, where an abundance of material affords excellent clinical advantages.

PÆDIATRICS.

PROFESSOR ACKER, Associate Physician to the University Hospital and Physician to the Children's Hospital.

Didactic and Clinical Lectures upon diseases of infants and children and the importance of their proper management by diet and hygiene are given.

GYNECOLOGY.

PROFESSOR JOHNSON, in Charge of the Department of Gynecology and Maternity Service, Central Dispensary and Emergency Hospital; Associate Gynecologist, University Hospital; Consulting Physician to Woman's Clinic and Washington Asylum Hospital.

Dr. Johnson gives his lectures on the diseases peculiar to women, with special clinical instruction in physical diagnosis at the Emergency Hospital from October to May. Students are required to attend. Operative work will be demonstrated as frequently as possible. The Professor has organized in connection with his service an outdoor maternity clinic, which is open to students.

MINOR SURGERY.

PROFESSOR MCARDLE, Pædiatrician, University Hospital.

The course in Minor Surgery consists of lectures and practical demonstrations concerning bandaging, preparation of materials used in aseptic and antiseptic dressings, preparations for aseptic or antiseptic operations, strapping, vaccination, and other minor surgical procedures. Under the supervision of assistants, the students themselves apply the various splints, bandages, surgical dressings, etc.

OPHTHALMOLOGY.

PROFESSOR BUTLER, Ophthalmologist at Garfield Hospital, in Charge of the Lutheran Eye and Ear Infirmary, and Associate Ophthalmologist, University Hospital.

A didactic course on this subject, together with clinical instruction at the Lutheran Eye and Ear Infirmary, is given.

LARYNGOLOGY AND OTOTOLOGY.

PROFESSOR RICHARDSON, Laryngologist to the University, the Providence, and the Episcopal Eye, Throat, and Ear Hospitals.

This course comprises lectures and clinical instruction on diseases of the nasal passages, pharynx, larynx, and also the ear.

Practical demonstrations are given in the use of the laryngoscope and other instruments required in these special branches.

NERVOUS DISEASES.

PROFESSOR TOMPKINS, in Charge of the Department of Nervous Diseases at the Central Dispensary and Emergency Hospital, Associate in Nervous Diseases, University Hospital.

Lectures and clinics are given upon the more common and important nervous affections.

SURGICAL PATHOLOGY.

PROFESSOR VAN RENSSELAER, Associate Surgeon, University Hospital, and one of the Surgeons to the Garfield Hospital.

A series of lectures upon the Pathological Anatomy of Surgical Diseases and Injuries and upon Surgical Bacteriology, illustrated by means of charts and photographs, is given.

ORTHOPEDIC SURGERY.

PROFESSOR SHANDS, Orthopedist, University Hospital.

This course embraces didactic lectures on the Pathology, Etiology, Course and Termination of all Chronic Joint Diseases, and, as far as practicable, with clinical instruction on treatment of the same according to the most modern orthopedic methods.

Special attention is given to the correction of all deformities, either acquired or congenital, by both mechanical and operative

measures. There are afforded also practical illustrations as to applications of all the most modern orthopedic appliances.

Practical instruction is given in the application and use of plaster of Paris in the treatment of Pott's Disease, Scoliosis, Club Feet, etc.

HYGIENE.

PROFESSOR PHILLIPS, in charge of the Section of Climatology,
U. S. Weather Bureau.

The course in Hygiene is directed to teaching the relations of habits and surroundings to health, and the approved methods for making both habits and surroundings contribute to the preservation of health and the prevention of disease; it comprises also the consideration of the laws of hygiene as applied to the individual and to the community.

BACTERIOLOGY AND PATHOLOGY.

ASSOCIATE PROFESSOR CARROLL, Pathologist of the University Hospital, of Columbia Hospital, and of the Army Medical Museum.

In this department the effort is made to give the student a practical knowledge, first, of the preparation of the various culture media, the principles of disinfection and sterilization, and the methods of cultivating, staining, and studying bacteria. Special attention is given to the pyogenic organisms and the bacilli of diphtheria and tuberculosis.

The latter half of the session is devoted to Pathology, and the student is now prepared to appreciate the association of these organisms with certain definite lesions in the tissues. After the detailed study of inflammation the diseases of the various organs are taken up in succession as far as possible. For this purpose sections illustrating the various pathological conditions are carefully selected and given to the student to be stained, mounted, and studied under the immediate supervision of the instructor. These sections become thereafter the property of the student.

The course terminates with the microscopical study of the several varieties of tumors.

MENTAL DISEASES.

PROFESSOR RICHARDSON, Superintendent of the Government Hospital for the Insane, St. Elizabeth.

A series of lectures and clinics is given upon the subject of insanity in its varied forms.

CLINICAL MICROSCOPY.

DR. JAMES CARROLL.

This course embraces the study of fresh and stained preparations of human blood in normal and pathological conditions; the Widal test for typhoid fever; the developmental stages of the malarial parasites in the blood and in the mosquito; the common forms of intestinal parasites and the microscopical examination of the urine.

NORMAL HISTOLOGY.

PROFESSOR NICHOLS.

The course in Normal Histology is required of students in the second year, and extends throughout the entire session. The Histological Laboratory, open both day and evening, is amply equipped with microscopes, apparatus, and material for practical histological work and for purposes of instruction. A systematic presentation of the facts relating to cytology and the minute structure of the tissues and organs of the body is given by means of lectures, the study of microscopical specimens, and the projection microscope. Students are also given practical instruction in the manipulation and care of the microscope, in the preparation of specimens for microscopical examination, and in microscopical technique generally. Examinations are held at the close of the session.

MEDICAL JURISPRUDENCE.

W. C. WOODWARD, M. D., Health Officer of the District of Columbia.

This course deals with the relations of physicians to matters under legal investigation. It covers as fully and practically

as possible the more important subjects of forensic medicine. Students are taught to give expert testimony and how to conduct themselves as medical witnesses.

LABORATORY INSTRUCTION.

As already noted in the introduction, the well-equipped new building is provided with modern laboratories for practical instruction in Anatomy, Physiology, Chemistry, Bio-Chemistry, Pharmacy, Normal Histology, Bacteriology, Pathological Histology, and Clinical Microscopy. These are large, well-lighted, and well-ventilated rooms, with a complete outfit of apparatus for each student. The desks are provided with water, gas, and steam and every facility for the best of practical work. Great stress is laid upon laboratory work in all the subjects named.

The Pathological Museum is equipped with a large number of interesting and valuable specimens. Dr. L. W. Glazebrook, the Deputy Coroner of the District of Columbia, has been made Curator of the Museum, and from time to time adds valuable specimens to the collection.

CLINICAL INSTRUCTION.

Attendance upon Clinical Instruction in Medicine and Surgery during at least two years is required, and upon other clinics as indicated by the special schedule. Records of attendance on these clinics will be kept and will duly affect the student's standing in his classes.

TEXT-BOOKS AND WORKS OF REFERENCE.

Anatomy.—*Gray's* or *Morris' Anatomy*; *Gerrish's* or *Quain's Anatomy*; *Heisler's Text-Book of Embryology*; *Holden's Manual of Dissection*; *Haynes' Manual of Anatomy*; *Wiedersheim's Structure of Man*; *Treves' Applied Anatomy*.

Physiology.—*Kirke's*; *Stewart's Manual*; *Yeo's*; or *Landois & Sterling's Physiology*.

Chemistry.—*Richler's*, *Remsen's*, *Simon's*, or *Fowne's Chemistry*; *Bowman's Medical Chemistry*; *Witthaus' Chemistry*; *Purdy's Ureanalysis*; *Remsen's Organic Chemistry*.

Materia Medica.—*H. C. Wood's Therapeutics*; *Hare's Practical Therapeutics*; *Culbreth's Materia Medica and Pharmacy*; *National Dispensatory*.

* The works first named and in *italics* are preferred.

- Surgery.**—American Text-Book of Surgery ; Surgery by American Authors, Park ; Surgical Pathology and Therapeutics, Warren.
- Practice of Medicine.**—Osler ; Tyson ; Anders ; Thompson, "Modern Medicine ;" Salinger-Kaltayer ; Da Costa's Hare's Diagnosis ; Musser's Diagnosis ; Clinical Diagnosis, Simon ; Klemperer ; Clinical Examination of the Blood, Cabot.
- Obstetrics.**—*Playfair*, or Jewett's Obstetrics ; American Text-book of Obstetrics (Saunders) ; Obstetric Surgery, by Grandin and Jarman ; A. F. A. King's Manual of Obstetrics.
- Gynecology.**—*Garrigue's Diseases of Women* ; Penrose, Diseases of Women ; Montgomery's Text-book of Gynecology ; Byford's Manual of Gynecology ; Dudley's Gynecology.
- Diseases of Children.**—*Holt on Diseases of Infants and Children* ; J. Lewis Smith ; Meigs and Pepper ; Rotch's Work.
- Histology.**—*Piersol's* ; Nichols' ; Stöhr, Böhm, and Davidoff (Hubey).
- Pathology and Bacteriology.**—Abbott's Principles of Bacteriology ; Ziegler's Pathological Anatomy.
- Hygiene.**—Park's Practical Hygiene ; Stephenson and Murphy's Treatise on Hygiene and Public Health ; Egbert's Hygiene.
- Dermatology.**—Hyde's Diseases of the Skin ; Jackson's Diseases of the Skin ; Duhring's Diseases of the Skin.
- Ophthalmology.**—Nettleship, de Schweinitz, or Fick.
- Minor Surgery.**—Wharton.
- Nervous Diseases.**—Text-book, Potts' Nervous and Mental Diseases ; Oppenheim, for reference ; Gray, Mills, Church, Peterson.
- Mental Diseases.**—Beaven Lewis.
- Orthopedic Surgery.**—Bradford and Lovett's or Young's Orthopedic Surgery.
- Laryngology and Otology.**—Bacon, Buck, Dench on the Ear ; Kyle, Price, Brown, F. S. Bishop on Throat Diseases ; Diseases of Ear, Nose, and Throat, by Burnett, Ingals, and Newcomb ; Diseases of Nose and Throat, by Shurley ; Diseases of Nose and Throat, by Coakley.
- Medical Jurisprudence.**—*Reese* ; Taylor's Manual ; Witthaus and Becker.
- Genito-Urinary and Venereal Diseases.**—White and Martin ; Hyde, Montgomery, Heys and Chetwood.
- Dictionaries.**—Dunglison's, Duane's, Foster's, or Gould's.

ADMISSION.

Candidates for matriculation are required to show that they are fitted, by previous education, for the study of medicine, and for this purpose they must either submit themselves to an examination or in lieu thereof present a satisfactory certificate of their attainments from approved schools or colleges.

Students conditioned or unable to undergo the examination in Latin or in Physics may obtain instruction on these subjects during the Freshman year, and on passing a satisfactory examination before the beginning of the second year will be regularly matriculated.

Dr. O. A. M. McKIMMIE, 1333 N Street, N.W., will give further information in regard to the examinations for admission.

ADVANCED STANDING.

Students of other institutions who have attended one course of lectures in any regular medical school are placed upon the same footing with those who have attended one course in this School, and those who have attended two (or three) courses of lectures in any other regular college or colleges rank with those who have attended two (or three) courses in this institution, and the same privileges as regards examination are extended to them; they are admitted respectively as second, third, or fourth year students after passing a satisfactory examination upon the subjects required of our own students during the first, second, and third years, as previously described.

GRADUATION.

Candidates for the degree of Doctor of Medicine must be of good moral character and at least twenty-one years of age; they must have studied medicine four years, and must have attended four courses of lectures, the subjects arranged as follows:

First Year.

Unless otherwise stated, numbers indicated below mean lecture hours per week.

Anatomy.—Six hours before, two hours after Christmas; two hours' recitation.

Physiology.—Four hours before, two hours after Christmas; two hours' recitation.

Chemistry.—Two hours before, two hours after Christmas; three hours' laboratory work.

Materia Medica.—Two hours before, two hours after Christmas; two hours' laboratory work.

Practical Anatomy.—Dissection-room open from 12 m. to 3 p. m., and from 7.30 to 11 p. m.

Examination at the end of the year upon the above-named subjects.

Second Year.

Anatomy.—Three hours before, two hours after Christmas ; two hours' recitation.

Physiology.—Four hours before, three hours after Christmas ; two hours' recitation.

Chemistry.—Two hours before, two hours after Christmas ; four hours' laboratory work.

Therapeutics.—Two hours before, two hours after Christmas ; one hour recitation.

Minor Surgery.—One hour, October 9 to December 11, in manikin-room.

Histology.—Laboratory, day and evening.

Practical Anatomy.—Dissection-room open from 12 m. to 3 p. m., and from 7.30 to 11 p. m.

Examination at the end of this year upon the above-named subjects.

Third Year.

Surgery.—Two hours before, two hours after Christmas ; one hour recitation.

Medicine.—Two hours before, two after Christmas ; one hour recitation.

Obstetrics.—Two hours before, two hours after Christmas ; one hour recitation.

Therapeutics.—Two hours before, two hours after Christmas ; one hour recitation.

Dermatology.—One hour, from January 8 to March 11.

Ophthalmology.—One hour, from October 9 to December 10.

Bacteriology and Pathology. Nine hours' laboratory work per week.

Surgical Pathology.—One hour, from October 12 to December 21.

Clinics as per schedule.

Medical Jurisprudence.—One hour, October 10 to December 19.

Mental Diseases.—Two hours, January to April.

Hygiene.—Three hours, January 7 to January 29.

Examination on the above-named subjects at the end of the year.

Fourth Year.

Surgery.—Two hours before, two hours after Christmas ; one hour recitation.

Medicine.—Two hours before, two hours after Christmas ; one hour recitation.

Obstetrics.—Two hours before, two hours after Christmas ; one hour recitation.

Clinics and laboratory instruction.

Gynecology.—One hour, and clinics from October to May ; one hour recitation.

Nervous Diseases.—Three hours, from November 5 to November 26.

Pædiatrics.—One hour, and clinics from January to April.

Otology and Laryngology.—Three hours, from October 14 to November 29.

Orthopedic Surgery.—Three hours, from October 8 to October 29.

Clinics, as per schedule.

Final examination at the close of the fourth year upon the above-named subjects.

The candidate must have dissected for at least two sessions, during each of which he shall be required to dissect two "parts" of a subject, and it is recommended that he dissect three parts. He must have attended also the required courses of clinical instruction in Medicine, Surgery, Obstetrics, and Special Branches.

One month before the close of the session he shall enter his name with the Dean of the Faculty as a candidate for graduation, and at the end of the term present himself for examination. The examination is both written and oral. The examination for the degree is held at the end of the session in May.

Graduates of other accredited medical schools must pass a satisfactory examination and attend one year before receiving a diploma from this University.

Students who fail to pass the examination in the spring may be allowed a reëxamination in the following fall *only*.

The diploma is presented at the Annual Commencement, and the degrees are conferred by The Columbian University, incorporated by act of the Congress of the United States.

THE UNIVERSITY HOSPITAL.

Clinical teaching is conducted in this *new and enlarged hospital* in conjunction with the didactic lectures in the various branches. The convenient location and the fact that the hospital is under the immediate control of the Medical Faculty offer unusual advantages to the students of this school.

GARFIELD HOSPITAL.—Clinical lectures are given regularly during the session by Professors Thompson and Van Rensselaer on Surgery, and by Professors Cook and Claytor on Medicine, Carmichael on Dermatology, Butler on Ophthalmology, Staveley on Gynecology. A great variety of medical and surgical diseases is to be seen in this institution, affording abundant material for clinical diagnosis and operative surgery.

CHILDREN'S HOSPITAL.—A weekly course of Surgical and Medical Clinics is given by Professors Thompson and Acker. An opportunity is here afforded for observing all the medical and surgical diseases, injuries, etc., to which children are liable. The Dispensary service of the Hospital is very large and instructive.

CENTRAL DISPENSARY AND EMERGENCY HOSPITAL.—Dr. H. L. E. Johnson, in charge of the department of diseases of women; Dr. Tompkins, in charge of nervous diseases; Dr. Shands on general medicine; Dr. Carmichael, in dermatology, and Dr. Hagner, in genito-urinary and venereal diseases, conduct courses of instruction in their respective branches.

PROVIDENCE HOSPITAL.—Clinical Instruction, both medical and surgical, is given by the staff of this institution. Gynecological clinics by Dr. J. W. Bovée.

LUTHERAN EYE AND EAR INFIRMARY.—The diseases of the eye and ear in this hospital are demonstrated during the clinics of Professor Butler.

EPISCOPAL HOSPITAL.—Dr. Richardson shows cases of diseases of the nose, throat, and ear in the dispensary service of this hospital.

COLUMBIA HOSPITAL.—Clinics and gynecological operations by Dr. Bovée.

ST. ELIZABETH'S.—Dr. A. B. Richardson, the superintendent, will give clinical instruction in mental diseases.

COLUMBIA HOSPITAL.—Dr. Cabell will give clinical instruction in obstetrics.

CLINICS, 1902-1903.

University Hospital.

Surgery.—Dr. Thompson, Tuesdays; Drs. Van Rensselaer and Carr.

Medicine.—Dr. Ruffin, Saturdays, at 4.30; Drs. Claytor, Acker, and Cook.

Dispensary Service.

Surgical Diseases.—Dr. Copeland, Tuesdays, Thursdays, and Saturdays, 1 to 2 p. m.

Medical Diseases.—Dr. Hardin, Tuesdays, Thursdays, and Saturdays, 2 to 3 p. m.

Gynecology.—Dr. H. L. E. Johnson and Dr. Bovée, Wednesdays and Fridays, 1 to 2 p. m.

Diseases of the Eye.—Dr. Shute, Mondays and Thursdays, 2 to 3 p. m.

Diseases of the Ear and Throat.—Dr. Richardson, Mondays and Thursdays, 1 to 2 p. m.

Diseases of the Skin.—Drs. Yarrow and Carmichael, Mondays, 2 to 3 p. m.

Diseases of Children and Orthopedic Surgery.—Drs. McArdle and Shands, Wednesdays and Saturdays, 2 to 3 p. m.

Nervous Diseases.—Dr. Tompkins, Tuesdays and Fridays, 2 to 3 p. m.

Genito-Urinary and Venereal Diseases.—Dr. Hagner, Saturdays, 1 to 2 p. m.

At the Garfield Hospital.

Surgery.—Dr. Thompson, Sundays, at 10.30, November to April; Dr. Van Rensselaer, Sundays, at 10.30, October 1 to November 1.

Medicine.—Dr. Claytor, Tuesdays and Thursdays, at 4.15, October 1 to January 1; Dr. Cook, Tuesdays and Thursdays, at 4.15, January 1 to April 1.

Medical Dispensary Service.—Dr. Reichelderfer, Mondays, Wednesdays, and Fridays, at 2 p. m.

Surgical Dispensary Service.—Tuesdays, Thursdays, and Saturdays, at 2 p. m.

Dermatology.—Dr. Carmichael, Saturdays, at 2 p. m.

Gynecology.—Dr. A. L. Staveley.

At the Children's Hospital.

Children's Diseases.—Dr. Acker, Wednesdays, at 4.15 p. m., January 1 to April 1.

Surgery.—Dr. Thompson, Tuesdays, at 10.30 a. m., October to April.

Medical Dispensary Service.—Dr. Leech, Tuesdays, Thursdays, and Saturdays, at 2 p. m.; Mondays, Wednesdays, and Fridays, at 2 p. m.

Surgical Dispensary Service.—Dr. McArdle, Tuesdays, Thursdays, and Saturdays.

At the Central Dispensary and Emergency Hospital.

Gynecology.—Dr. H. L. E. Johnson, Sundays, at 1 p. m., October to April (fourth year).

Orthopedic Surgery.—Dr. Shands, Fridays, at 1 p. m. (fourth year).

Nervous Diseases.—Dr. Robins, Mondays and Thursdays, at 12 noon (fourth year).

Surgery.—Dr. W. P. Carr, daily, at 2 p. m., and Thursdays, at 5.30 p. m., October to January 15; Dr. W. B. Jackson clinical assistant.

Genito-urinary.—Dr. F. R. Hagner, Tuesdays, 1 to 2 p. m. (fourth year).

Dermatology.—Dr. Carmichael, Tuesdays and Fridays, 1 to 2 p. m. (third year).

At the Lutheran Dispensary.

Ophthalmology.—Dr. Butler, Tuesdays, at 1 p. m. (third year).

Episcopal Eye, Ear, and Throat Hospital.

Otology and Laryngology.—Dr. Richardson, Saturdays, at 1 p. m., November and December (fourth year).

At Providence Hospital and at Columbia Hospital by Special Invitation.

Gynecology.—Dr. Bovée, Mondays and Thursdays (fourth year).

Columbia Hospital.

Obstetrical Demonstrations.—Dr. Cabell will superintend this work at the hospital, and notify fourth-year students when cases are ready.

At St. Elizabeth's.

Mental Diseases.—Dr. A. B. Richardson, Saturdays, January 1 to April 1.

Clinics at the UNIVERSITY HOSPITAL will be given by members of the Faculty at hours to be named at the beginning of the course.

In addition, clinics will be given at the other hospitals of the city in accordance with schedule just given.

Cards giving exact days and hours of all clinical instruction are issued at the beginning of each term.

When the student presents himself for graduation his record must show that he has attended full courses in clinical instruction in the various branches required.

PRIZES.

GENERAL EXAMINATION PRIZE.—At the end of the term a general examination prize of fifty dollars is awarded. It is given to the candidate for graduation who shall pass the best general examination.

FACULTY PRIZE.—The Faculty awards two prizes—one for proficiency in Clinical Medicine and one for proficiency in Clinical Surgery.

YARROW PRIZE.—Professor H. C. Yarrow gives a prize for the best examination in Dermatology.

JOHNSON PRIZE.—Professor H. L. E. Johnson gives a prize for the best examination in Clinical Gynecology.

RICHARDSON PRIZE.—Professor C. W. Richardson gives a prize for the best examination in Laryngology and Otology.

TOMPKINS PRIZE.—Professor E. L. Tompkins gives a prize for the best examination in Nervous Diseases.

ACKER PRIZE.—Professor Acker gives a prize for the best examination in Pædiatrics.

BUTLER PRIZE.—Professor Butler gives a prize for the best examination in Ophthalmology.

SCHOLARSHIPS.

CORCORAN SCHOLARSHIPS.—By virtue of a liberal endowment from the late Mr. W. W. Corcoran, this Department is enabled to offer six free scholarships.

Two of these scholarships are open for competitive examination to the graduates of the several High Schools of the District of Columbia. These two scholarships are awarded to the two students whose averages are highest.

Two of the scholarships are open for competitive examination to graduates of any reputable High School or College (preference being given to those in the District of Columbia) who shall give satisfactory written evidence of pecuniary inability

and certificates of good moral character and industry. These two Scholarships are awarded to the two graduates whose averages are highest.

The remaining two scholarships are open for competitive examination to students who, though not graduates of any High School or College, yet give satisfactory evidence that they are fitted by previous education for the study of medicine, and at the same time give satisfactory written evidence of pecuniary inability and certificates of good moral character and industry. These two scholarships are awarded to the two students whose averages are highest.

MEDICAL MISSIONARY SCHOLARSHIPS.—The Faculty offer two Medical Missionary Scholarships, which will be given to those applicants who after one year's work are judged by the President of the University best qualified to enter the study of medicine for the purpose of becoming medical missionaries.

Applications for scholarships should be addressed to the Dean and filed not later than the first of September.

COURSES IN DEPARTMENT OF ARTS AND SCIENCES

Students taking a full course for a degree may be admitted without additional fee, except matriculation and laboratory fees, to courses for which they are qualified, in the Department of Arts and Sciences.

FEES.

For the session of 1902-03 and thereafter the fee for each year will be \$110. This covers all expenses, dissection and laboratories included, except breakage or loss of valuable apparatus in the laboratories. Of the total fee for the year at least \$25 must be paid upon entrance, \$25 more by December 15, before beginning dissection, \$25 more by February 1, and the balance by April 15. Each graduate pays a \$10 fee for diploma.

A deposit is required to defray the expense of apparatus destroyed in the chemical and other laboratories.

For *special* courses only, separate from the regular courses, the following fees will be charged:

Matriculation fee, payable only once	\$5 00
Single tickets	25 00
Practical Anatomy, by the Demonstrator	15 00
Laboratory tickets, each, per year	20 00

Payment of the fees is required in all cases, and must be made at the beginning of the session, unless there are special arrangements with the Dean to suit the convenience of the student.

The prices of board range from \$12 to \$30 per month, and rooms may be obtained for \$10 and upward per month, according to location, etc.

NEW BUILDINGS.

New buildings have been completed for the Department of Medicine and the Hospital. The new hospital building, 60 x 80 feet, five stories in height, is already occupied. This is fire-proof in construction, with the most modern private and public wards, with private baths and all modern improvements for ventilation, heating, etc. The public as well as private wards have delightful sun parlors, and every effort is employed to make the hospital home-like.

The new building for the Department of Medicine is 50 x 144 feet, five stories in height, with four large lecture halls, accommodating from 200 to 350 students each, large laboratories for chemistry, pharmacy, histology, physiology, bacteriology, pathology, and anatomy; recitation-rooms, professors' rooms, museum and reading-room, and study-rooms. Every facility is given, therefore, for the best of theoretical and practical work.

LOCATION.

The new Medical Building is situated opposite a Government reservation, at No. 1325 H Street, N. W. The University Hospital Buildings, 1333 and 1335 H Street, N. W., are within half a square of all lines of street cars going to every part of the city.

Students desiring further information are requested to address

DR. E. A. DE SCHWEINITZ, *Dean*,

1325 H Street.

NOTE.—*The names and addresses of students enrolled for the year 1902-'03 will be given in the May bulletin.*

Department of Dentistry.

THE FACULTY.

- CHARLES W. NEEDHAM, LL. D.,
President of the University.
- J. HALL LEWIS, D. D. S., Dean,
Professor of Dental Prosthetics.
- HENRY C. THOMPSON, D. D. S.,
Professor of Operative Dentistry.
- D. KERFOOT SHUTE, M. D.,
Professor of Anatomy.
- EMIL A. DE SCHWEINITZ, M. D.,
Professor of Chemistry.
- WILLIAM P. CARR, M. D.,
Professor of Physiology.
- THOMAS A. CLAYTOR, M. D.,
Professor of Materia Medica and Therapeutics.
- JONATHAN R. HAGAN, D. D. S.,
Professor of Oral Surgery.
- W. F. R. PHILLIPS, M. D.,
Demonstrator of Anatomy.
- JOHN B. NICHOLS, M. D.,
Professor of Normal Histology.
- JAMES CARROLL, M. D.,
Professor of Pathology and Bacteriology.
- WILLIAM H. TRAIL, D. D. S.,
R. E. L. HACKNEY, D. D. S.,
CHARLES R. RICE, D. D. S.,
H. W. JOHNSON, D. D. S.,
WILLIAM C. FISHER, D. D. S.,
CHARLES B. KEEFER, D. D. S.,
Demonstrators, in Charge of Infirmary.

NEW BUILDING.

The Faculty take pleasure in announcing that the new building of the Department of Dentistry is now completed and

occupied. This building is 50 feet by 144 feet, five stories in height, of fire-proof construction, and with every facility for the instruction and comfort of the students. There are four large lecture halls, with modern heating and ventilating appliances. The laboratories for Chemistry, Histology, Physiology, Bacteriology, Pathology, and Anatomy are models of their kind, while the operative and prosthetic technic laboratories are thoroughly equipped for Technic instruction.

The Dental Infirmary is 50 feet by 75 feet, on the third floor; in order to have an unobstructed light, it has large windows on three sides; there are adjoining prosthetic laboratories, separate lavatories for students and patients, and lockers sufficiently high to accommodate a dental engine. In fact, everything is provided to insure the comfort and convenience of all who occupy or visit this portion of the building.

COURSES OF INSTRUCTION.

The Regular Course of Lectures begins on October 1, 1903, and continues eight months.

The Introductory Lecture of the Course will be delivered by Dr. H. C. Thompson, on the above date.

The courses of instruction extend through four years.

As, however, no amount of scientific attainment can compensate for lack of manipulative skill, a large part of the student's time is devoted to actual practice in the Infirmary, for which purpose the large and centrally located Dental building gives ample opportunities.

The operating-room fronts on one of the Government reservations, and thus has a full, unobstructed light, so desirable in dental operations. It is furnished with all necessary appliances that will enable a student to acquire the knowledge of office practice, as well as a diversity of clinical experience.

A large, comfortable, and well-lighted Dental Laboratory is supplied with all the requirements for the successful practice of Prosthetic Dentistry, and lockers are available for the safe-keeping of instruments belonging to the students.

The extracting-room is separate from the others, and is fitted up for the proper administration of the various anæsthetics, under the immediate supervision of a demonstrator thoroughly skilled in their application.

Special attention is called to the thoroughness of the practical instruction in the infirmary, which is under the immediate supervision of Professor Lewis and Drs. Trail and Hackney, the Demonstrators in charge. They are in constant attendance

during the entire term, directing and overseeing the operations of the students, who thus have the benefit of their many years of experience in Dental Practice.

The infirmary is open every week day for nine continuous months (being closed during the months of July, August, and September), during which time an abundance of clinical material is readily available. In fact, fully as many patients present themselves as can possibly be attended to by the students.

The student has, therefore, the privilege of thirty-six months' actual practice in the infirmary, during which time he may become proficient in all those operations which the dental surgeon is ordinarily called upon to perform in office practice.

This Department complies with all the requirements of the National Association of Dental Faculties, and also with those of the National Association of Dental Examiners, in so far as the requirements of the latter do not conflict with those of the former.

PROSTHETIC DENTISTRY AND METALLURGY.

PROFESSOR LEWIS.

In this department the principles involved in the construction of artificial substitutes are exhaustively considered, and the lectures supplemented by practical demonstrations of the subjects mentioned.

In addition to the more commonly used vegetable bases for artificial teeth, the use of gold, silver, and platinum is thoroughly taught, and bridge work, and the construction of appliances for correcting oral irregularities, etc., are carefully considered.

The modes of preparation, properties, etc., of the metals and alloys of particular interest to the dentist receive special attention.

The instruction is thoroughly practical, with the purpose of preparing the student for the actual every-day practice of prosthetic dentistry.

OPERATIVE DENTISTRY, DENTAL ANATOMY, AND PATHOLOGY.

PROFESSOR THOMPSON.

This course embraces lectures on the special anatomy and physiology of the teeth. The origin, growth, and eruption

of the teeth receive minute attention, and are illustrated as their importance demands.

The methods of treating, filling, and extracting teeth receive attention in the lecture-room, and are demonstrated clinically by gentlemen whose reputations are fully established as proficient operators. Extended consideration is given to Dental Pathology and Therapeutics.

CHEMISTRY.

PROFESSOR DE SCHWEINITZ.

The instruction in this department embraces :

A short discussion of the principles of Physics in their relation to Chemistry, the principles of chemical philosophy, and the laws of chemical combination.

A study of the elements, metallic and non-metallic ; the preparation, properties, and réaction of their different compounds and their application in dentistry.

Organic Chemistry, with special attention to those organic compounds that are of practical use.

Laboratory instruction in the determination of acids and bases, analyses of alloys, etc.

PHYSIOLOGY.

PROFESSOR CARR.

The subject is fully covered by a two years' course of lectures, and these lectures are so illustrated by modern diagrams, models, and experiments as to make them clear in every detail. Emphasis is given to those truths that have a known practical value.

MATERIA MEDICA AND THERAPEUTICS.

PROFESSOR CLAYTOR.

Instruction in this department extends through the first two years, and embraces :

The study of crude drugs and their preparations, and the art of prescribing.

The physiological action of drugs in the human system.

The practical application of drugs and other therapeutical agencies to the prevention and cure of diseases and the relief

of suffering, together with their antidotal relations to poisons.

The subject is taught by means of lectures, recitations, and blackboard illustrations, and is made practical to as great a degree as is compatible with a sufficiently thorough understanding of its principles.

In connection with this chair is a pharmaceutical laboratory, well equipped with modern appliances, in which are taught the making of typical preparations of the Pharmacopœia, prescription writing, and the compounding of prescriptions.

ANATOMY.

PROFESSOR SHUTE.

This course of lectures is arranged with the view to render the didactic instruction in Anatomy as full and complete as the limits of the session will allow.

The lectures are illustrated by frequent reference to recent dissections and numerous drawings and diagrams. The sciop-ticon also is constantly employed to present photographic views of many regions of the body.

Public oral examinations are conducted by the lecturer from time to time.

The prosectors prepare the subject for the lecturer.

The Demonstrator of Anatomy and his assistants give their personal attention to the students in the dissecting-room.

Practical Anatomy.

The dissecting-room is large, thoroughly ventilated, well lighted, and furnished with every requisite for the convenience and comfort of the student. Anatomical material is abundantly supplied free of charge. The room is open during the day and at night until 11 P. M., or even later on some occasions. It is under the supervision of the Faculty and the immediate direction of the Demonstrator of Anatomy, who, with his assistants, is present at stated hours to give his personal attention to the students and to instruct his classes in their dissections.

ORAL SURGERY.

PROFESSOR HAGAN.

A full course of lectures upon this subject is given, and arrangements have been made for clinical demonstrations in the Infirmary, in order to teach more thoroughly this interesting branch of general dentistry.

HISTOLOGY.

PROFESSOR NICHOLS.

The course in Histology consists in a systematic presentation of the subject of the minute anatomy of the various parts of the body, especial attention being devoted to the histology of the teeth and neighboring structures. The subject is presented partly by systematic lectures, and more especially by the practical study by the individual students of actual specimens under the microscope. The methods of preparation of microscopical specimens are presented and practiced in the laboratory. The projection microscope, which affords valuable aid in illustrating and presenting the subject, is constantly used.

BACTERIOLOGY.

PROFESSOR CARROLL.

The course is begun with a consideration of the principles involved in the process of sterilization by dry and moist heat, the relative value and mode of application of each, and an explanation of the construction of the apparatus employed for the purpose. The use and construction of the thermostat is taken up at the same time and the student taught how he can dispense with these costly appliances in emergencies.

The composition and modes of preparation of the various nutritive media are next considered, working formulas given, and the students required to prepare them at least once in the laboratory. This is followed by a discussion of bacteria as a class, their position in the biological world, their classification, distribution, and the general and special characters that belong to them.

After this preparatory training the various methods in use for the isolation and study of bacteria are taught by practical demonstration and practiced by the students, after which the most important pyrogenic organisms are studied in detail, giving special attention to those found in the nasal and oral cavities.

The aim of the course is chiefly to afford the students an opportunity to become practically familiar with bacteriological working methods, and to enable them to isolate and identify the bacteria present in suppurative processes, as well as to comprehend intelligently the references to micro-organisms in the current professional literature of the day.

TEXT-BOOKS AND WORKS OF REFERENCE.

ANATOMY.—Gerrish, *Gray's*,* Holden's Manual of Dissection.

PHYSIOLOGY.—*Yeo's* or Kirke's Physiology.

CHEMISTRY.—Simon's, Fowne's, or Mitchell's Chemistry.

MATERIA MEDICA.—*H. C. Wood's Therapeutics*; National Dispensatory; Eades' Therapeutics.

PROSTHETIC DENTISTRY.—*The American Text-book of Prosthetic Dentistry*; Essig's Dental Metallurgy.

OPERATIVE DENTISTRY.—*Harris' Principles of Practice*; Tome's Dental Anatomy and Surgery; Taft's Operative Dentistry; American System of Dentistry—Litch; Gould's Medical Dictionary.

ORAL SURGERY.—Marshall's Oral Surgery.

ADMISSION.

The minimum preliminary educational requirement of this college is a certificate of entrance into the third year of a high school or its equivalent. The preliminary examination will be placed in the hands of the State Superintendent of Public Instruction.

ADVANCED STANDING.

The following is considered as equivalent to one course in this Department: A diploma from a recognized medical school, or satisfactory evidence that the student has passed the first-year examination in some other reputable dental school.

The following is considered as equivalent to two courses in this Department: A diploma from a reputable dental school, or evidence of having passed the second-year examination in the same.

GRADUATION.

Candidates for graduation must have attended four full courses of lectures, each of eight months' duration, and four courses of Clinical Instruction in this Department, during the regular winter term and in separate years, with the exceptions noted below. Students are examined at the end of the regular course upon all subjects taught them during that course.

*The works first named and in *italics* are preferred.

Students may go up for examination only in the spring and upon the dates regularly selected for that purpose. Should the student fail in his examination in the spring, he may be reëxamined in the fall. All fees must be paid and Infirmary requirements complied with before the student may present himself for examination.

Students must enter before, or within ten days after, the opening lecture of the regular winter course. They may register at any time during the nine months' Infirmary Course, and thus begin Infirmary practice at once upon payment of twenty-five dollars, which amount will be deducted from their tuition fees for the succeeding regular term.

The candidate for graduation must be examined upon all subjects taught in this Department, with exceptions noted above, and before the examination he must perform operations upon the natural organs in the Infirmary, and present the Museum a well constructed specimen of dental mechanism made by himself in the Dental Laboratory of the University.

In addition to the above requirements, the moral character and habits of the candidate, his industry, and diligent attendance will be taken into consideration. Notable negligence, immorality, or habitual absence from the lectures will preclude the candidate from attaining his degree, even though he may have acquired sufficient technical knowledge to pass a creditable examination. This reservation on the part of the Faculty of the right to make good moral character a prerequisite for graduation must not be overlooked.

The student also, during and between the sessions, must comply with the State laws regulating the practice of Dentistry, and act in accordance with the recognized code of ethics of the dental profession.

Candidates for graduation in this Department who desire to obtain a medical degree thereafter may be admitted to the medical examination on the primary branches at the termination of their second dental course, provided that, one month before the spring examinations, they give to the Dean written notice of their intention, and provided also that they have complied with the requirements of the Department of Medicine as regards Dissection, the study of Histology, etc.

The degrees are conferred by The Columbian University, incorporated by act of Congress of the United States.

PRIZES.

FACULTY PRIZE.—A prize will be given by the Faculty to the graduate passing the best examination in all branches and having the best Infirmary record. At the last commencement this prize was awarded to J. R. De Farges, of the District of Columbia.

COURSES IN DEPARTMENT OF ARTS AND SCIENCES

Students taking a full course for a degree may be admitted, without additional fee, except matriculation and laboratory fees, to courses for which they are qualified, in the Department of Arts and Sciences.

FEES.

First Year	\$100 00
Second Year	100 00
Third Year	100 00
Fourth Year	110 00

The above includes all the tuition expenses. There are no extras whatever. The Dissection Material, Chemicals, Instruction in the Histological, Pharmaceutic, and Chemical Laboratories and Dental Infirmary are all furnished to the students free of charge. Laboratory is charged to the student's account.

Each student must furnish his own books and dental instruments.

The student is required to make a payment of twenty-five dollars upon registering, and twenty-five dollars additional must be paid before he may avail himself of Laboratory and Infirmary instruction.

The prices of board and all other personal expenses are as reasonable in Washington as in other large cities.

LOCATION.

The new Dental and Medical Building is situated opposite a Government reservation, at No. 1325 H Street, N. W. The University Hospital Buildings, 1333 and 1335 H Street, N. W., are within half a square of all lines of street cars going to every part of the city.

The Dean may be seen personally at 1023 Vermont avenue, on any week day, from 3.30 to 4.30 p. m., and also at the Dental Building, 1325 H Street, N. W., on Monday, Wednesday, and Friday of each week.

For further information regarding the Department of Dentistry, application may be made to

J. HALL LEWIS, *Dean*,

1325 H Street N. W.

NOTE.—*The names and addresses of students enrolled for the year 1902-1903 will be given in the May bulletin.*

Department of Law.

THE FACULTY.

- CHARLES W. NEEDHAM, LL. D., President of the University.
Professor of the History and Classification of Law, and
Trusts and Trades Unions.
- Hon. JOHN M. HARLAN, LL. D., (Associate Justice of the Supreme Court
of the United States),
Professor of Constitutional Law, Domestic Relations,
Torts, and Personal Property.
- Hon. DAVID J. BREWER, LL. D., (Associate Justice of the Supreme Court
of the United States),
Professor of the Law of Corporations.
- Hon. WILLIAM A. MAURY, LL. D., (Member of the Spanish Treaty
Claims Commission, Some time Assistant Attorney General of the
United States),
Professor of Common Law Pleading, Evidence, Federal
Procedure, and Insurance.
- WILLIAM G. JOHNSON, LL. M., (Of the Washington Bar),
Professor of Common Law Practice.
- Hon. WILLIS VAN DEVANTER, (Assistant Attorney General of the United
States),
Professor of Equity Jurisprudence, and Equity Pleading
and Practice.
- MELVILLE CHURCH, LL. M., (Of the Washington Bar),
Professor of the Law of Patents.
- WILLIAM F. MATTINGLY, LL. D., (Of the Washington Bar),
Professor of the Law of Commercial Paper.
- Hon. STANTON J. PEELLE, LL. D., (Judge of the United States Court of
Claims),
Professor of the Law of Partnership, Agency, and Bailments.
- WALTER C. CLEPHANE, LL. M., (Of the Washington Bar),
Professor of the Law of Contracts, and Judge of the Moot
Court.
- EDWIN C. BRANDENBURG, LL. M., (Of the Washington Bar),
Professor of Bankruptcy and Insolvency.
- ARTHUR PETER, LL. M., (Of the Washington Bar),
Professor of the Law of Real Property, and Judge of the
Moot Court.

- CHANNING RUDD, D. C. L., (Of the Washington Bar),
Professor of Oratory and Assistant Professor of the Sources,
Classification, and Elements of Law.
- HENRY P. BLAIR, LL. M., (Of the Washington Bar),
Assistant Professor of the Law of Torts, Personal Property,
and Domestic Relations.
- JOHN PAUL EARNEST, A. M., LL. M., (Of the Washington Bar),
Professor of Criminal Law, Criminal Procedure, and Judge
of the Moot Court.
- Hon. HANNIS TAYLOR, LL. D., (Formerly Minister to Spain),
Lecturer on the History of English Law.
- Hon. FREDERICK I. ALLEN, (Commissioner of Patents),
Lecturer on Substantive Patent Law.
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COURT OF APPEALS.

- WILLIAM F. MATTINGLY, LL. D.,
Chief Justice.
- ANDREW B. DUVALL, LL. B.,
JOHN B. LARNER, LL. B.,
Associate Justices.
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- EDGAR BUXTON,
Assistant Librarian, and Assistant to the Secretary.
- ELMER L. MOULDEN,
Assistant Librarian.
- GEORGE CARROLL TODD, B. S., LL. B.,
Clerk of the Moot Court.
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- CHANNING RUDD, D. C. L.,
Secretary and Librarian of the Departments of Law, Juris-
prudence and Diplomacy.
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This Department was established in 1865, and it is the oldest school of law in Washington. Men occupying the highest positions in the profession are in its faculty, personal contact with whom is a source of inspiration to every student.

LAW LECTURE HALL.

Law Lecture Hall is devoted exclusively to the Departments of Law, Jurisprudence and Diplomacy. It adjoins University Hall, corner Fifteenth and H Streets, two blocks from the White House. This new building contains three commodious lecture halls, two moot-court rooms, a large and well lighted library-room, and administrative offices. The building is lighted by electricity, handsomely furnished, and well equipped and adapted to the work for which it is designed.

ADMISSION.

Applicants for admission to the First-year class as candidates for a degree must be at least eighteen years of age, and must have had an education equivalent to a high school course.

The educational requirement may be satisfied by a presentation of certificates or by an examination before the Dean. Application blanks will be furnished by the Secretary.

The regular course of study embraces three years. There is also a special course of one year in Patent Law.

A student may be admitted to advanced standing upon furnishing evidence satisfactory to the Dean that he has spent time, not less than three months, and regularly pursued courses of study in a recognized law school or in a law office under the direction of a practicing attorney in good standing; and in all such cases he shall file a certificate of the facts, and if such certificate be from a law school he may receive credit for the time he has attended such school and for the studies in which he has passed successful examinations. If the certificate be from a practicing attorney, the student may receive a reasonable credit for time, but shall take examinations in all the studies pursued and for which he asks credit.

The annual session begins on the Monday nearest the first day of October, and continues until the Wednesday nearest the first day of June following.

The lectures will be delivered between the hours of 4.30 and 6.30 in the afternoon. Beginning October 1, 1903, class-room work from 9 until 12 a. m. will be given to first-year students desiring it.

The register will be opened for the enrollment of students on the first day of September.

The University, in October, 1898, increased the regular course of study for candidates for the degree of Bachelor of Laws to

three years. The work has been largely increased with a view of giving students that thorough knowledge of the general rules of law and practice which will fit them for the Bar of any State. Professors will conduct the study of each subject by lectures, required courses of reading, the study of cases, and class conferences. The study of special cases upon the various subjects treated and the Moot-Court work have been largely increased, thus bringing before the student the modern applications of law by the courts of the country.

Special instruction and practical work are given the students in the preparation of Contracts and Wills, and in the organization of Corporations. This work is carefully examined and returned to the student, with suggestions by the instructors in charge of the work.

There will be ten hours per week of class-room work in each year of the course.

COURSES OF INSTRUCTION.

First Year.

After preliminary lectures on the study of law, the courses are as follows:

Sources and Classification of Law. Professor NEEDHAM. One hour, one-half year.

History of English Law. Professor TAYLOR. *One hour.

Constitutional Law. Professor HARLAN. One hour.

Torts. Professor HARLAN. One hour, one-half year. "*Pollock on Torts*" and special cases.

Contracts. Professor CLEPHANE. Lectures and Conferences. Two hours. "*Clark on Contracts*" and "*Hopkins' Cases on Contracts*."

Criminal Law. Professor EARNEST. Lectures and Conferences. One hour. "*Clark's Criminal Law*."

Partnership, Agency, and Bailments. Professor PHELLE. Lectures and Conferences. One hour. "*Burdick on Partnership*" and "*Huffcutt on Agency*."

Domestic Relations. Professor HARLAN. One hour, one-half year. "*Brown on Domestic Relations*" and special cases.

* Unless otherwise stated, hours per week throughout the year.

Commercial Paper. Professor MATTINGLY. Lectures and Conferences. One hour, one-half year. *Special cases.*

Personal Property. Professor HARLAN. One hour, one-half year. "*Smith on Personal Property*" and *special cases.*

Class Conference—Torts, Domestic Relations, and Personal Property. Assistant Professor BLAIR. One hour.

Class Conference—Sources, Classification, and Elements of Law. Assistant Professor RUDD. One hour. "*Robinson's Elementary Law.*"

First year examinations will be held at the conclusion of each course in the following subjects: Sources, Classification, and Elements of Law; Torts; Contracts; Criminal Law; Partnership, Agency, and Bailments; Domestic Relations; Commercial Paper; and Personal Property.

First year instruction will be carried on by topical lectures, supplemented by carefully arranged courses of reading and the study of selected cases which state and illustrate the law. There will be class conferences upon the lectures, and free questioning by students is encouraged. Quiz classes may be formed, and every facility will be afforded the student to aid him in a thorough understanding of the subjects studied.

Second Year.

Common Law Pleading. Professor MAURY. Lectures and Conferences. One hour. "*Stephen on Pleading*" (Tyler).

Evidence. Professor MAURY. Lectures and Conferences. Two hours. "*Thayer's Cases on Evidence.*"

Equity Jurisprudence. Professor VAN DEVANTER. Lectures and Conferences. One hour. *Pomeroy, Story, or Eaton.*

Corporations. Professor BREWER. Lectures and Conferences. One hour. *Morawetz, Dillon, or Clark.*

Constitutional Law. Professor HARLAN. One hour. "*Story's Commentaries on the Constitution.*"

Real Property (Things Real, Ownership, and Estates). Professor PETER. Lectures and Conferences. Two hours. "*Tiedeman on Real Property,*" *Book II of Blackstone* and *special cases.*

Contracts (concluded) and Contract Drafting.—Professor CLEPHANE. Lectures and Conferences. Two hours. *Special cases.*

Insurance (Fire, Life, and Marine) Professor MAURY. Lectures and Conferences. One hour, one-half year. "*Wambaugh's Cases on Insurance*."

Second year examinations will be held at the conclusion of each course in the following subjects: Common Law Pleading; Evidence; Equity Jurisprudence; Corporations; Constitutional Law; Real Property; Contracts; and Insurance.

Special courses of reading in text-books and selected cases will be assigned by the professors, and cases will be used in the lectures to illustrate the subject under consideration. Practical work in the preparation of contracts and written obligations of various kinds will be given to students by the professors, and this work carefully examined. The second-year students will be divided into sections, and there will be discussions and papers upon the subjects gone over in the first and second years' study.

Third Year.

Common Law Practice. Professor JOHNSON. Lectures and Conferences. One hour. "*Cox's Common Law Practice*" and selected cases.

Equity Pleading and Practice. Professor VAN DEVANTER. Lectures and Conferences. One hour. "*Shipman on Equity Pleading*" and special cases.

Federal Procedure. Professor MAURY. Lectures and Conferences. One hour, one-half year. "*Curtis' Jurisdiction of United States Courts*" and "*Maury's Federal Jurisdiction and Procedure*."

Criminal Procedure. Professor EARNEST. Lectures and Conferences. One hour. "*Clark's Criminal Procedure*."

Equity Jurisprudence. Professor VAN DEVANTER. Lectures and Conferences. One hour, one-half year. "*Pomeroy, Story, or Eaton*."

Bankruptcy and Insolvency. Professor BRANDENBURG. Lectures and Conferences. One hour. "*Brandenburg on Bankruptcy*."

Real Property (Titles and Equitable Estates) and Testamentary Law. Professor PETER. Lectures and Conferences. Two hours. "*Tiedeman on Real Property*," *Book II of Blackstone* and special cases.

Organization of Trusts and Trades Unions. Professor NEEDHAM. Lectures and Conferences. One hour, one half year.

Real Estate Remedies. One hour, one-half year.

Legal Ethics and the Preparation, Trial, and Argument of Cases. One hour, one-half year.

Moot Courts. Professors CLEPHANE, PETER, and EARNEST. Six hours.

Third-year examinations will be held at the conclusion of each course in the following subjects: Common Law Practice; Equity Pleading and Practice; Federal Procedure; Criminal Procedure; Equity Jurisprudence; Bankruptcy and Insolvency; and Real Property. The grades received in Moot Court work are counted in determining the student's final standing.

The third-year course will also be carried on by special lectures and the study of selected cases; special courses of reading will be assigned, and each student in the third year will take part in the preparation of cases in the Moot Courts, law and equity, upon such a statement of facts as a client would give to a lawyer in active practice, the cases to be carried through from the commencement of the action to a final hearing, according to rules of procedure prepared by the professors in charge of the Moot Courts; cases may be taken by appeal to the Appellate Moot Court. This gives the student practice and drill in determining what actions will lie upon a given state of facts, what defenses may be interposed, and the various steps in the conduct of cases in court. These courts will be presided over by professors and lawyers from the Washington Bar.

THE GRADUATE COURSE.

Fourth Year.

The following are the studies pursued by candidates for the degree of Master of Laws:

1. Required Course.

Constitutional Law of the United States. One hour. Professor HARLAN. *Story on the Constitution.*

International Public Law. One hour. Professor BREWER. *Hall's International Law.*

International Private Law. One hour. Professor TAYLOR. *Minor's Conflict of Laws.*

Roman Law. One hour. Professor HOWE. *Howe's Studies in the Civil Law.*

Transportation and Interstate Commerce Law. One hour. Professor NEEDHAM.

2. Elective Course.

In addition to the five required courses, the student must select and pursue two of the following courses:

Advanced Procedure (Pleading, Practice, and Evidence) and Office Practice. Practical instruction and exercises in the preparing of legal papers. Two hours. Professor CLEPHANE.

Roman Law Seminar. Two hours. Professor MCHARG.
Comparative Politics and Political Geography. Lectures and Conferences. Two hours. Professor SWISHER.

Appellate Moot Court. The students in turn prepare and argue appellate cases, and may be required to write opinions. Briefs and opinions are carefully examined, criticised, and graded by the professors in charge. Two hours. Judges MATTINGLY, LARNER, and DUVAL.

Fifth Year.

After receiving the degree of Master of Laws (including at least three hours per week of Roman Law), candidates for the degree of Doctor of Civil Law shall pursue the following courses:

Laws of Ancient Nations.* One hour.

(a) History and General Principles of the Laws of India, Egypt, Palestine, and Greece. Professor HOWE.

(b) A General View of the Law in Europe during the Middle Ages. Professor HOWE.

Roman Law. Two hours.

(a) History and General Principles of Roman Law to and including the time of Justinian. Professor HOWE.

(b) The Extension of the Roman Law into some of the Modern States. Professor HOWE.

The Common Law of England; its History and Extension into some of the Modern States. Two hours. Professor TAYLOR. *Taylor's Origin and Growth of the English Constitution.*

Jurisprudence of France and Spain. Professor STROBEL.

Jurisprudence of Canada. Professor HOYLES.

* No text-book.

International Public Law. One hour, one-half year. Professor BREWER.

Interstate Commerce Law. One hour, one-half year. Professor KNAPP.

Comparative Politics. One hour. Professor SWISHER.

Class Conference, Comparative Politics. One hour. Assistant Professor HOLCOMBE.

Special Lectures, Class Discussions and Conferences, five hours.

The class-room work for each year will occupy about ten hours—two hours every week day except Saturday.

Sixth Year.

Elective courses and review.

Preparation of thesis for D. C. L. degree.

(Attendance optional, and one-half tuition only is charged for this year.)

• PATENT LAW COURSE.

A special course in Patent Law and Patent Law Practice will be conducted by Professor Church, giving thorough preparation to those who contemplate entering that department of jurisprudence. This course covers a period of eight months, with two lectures or sessions of the Moot Court each week. The degree of Master of Patent Laws will be conferred upon those who pass satisfactory examinations at the close of the term. Only graduates in law or members of the bar are eligible to the degree, but any person qualified to profit by the instruction offered will be admitted to the course.

A special course of lectures on Substantive Patent Law is delivered by Hon. Frederick I. Allen, the Commissioner of Patents.

ORATORY.

The purpose of this course is to qualify the student to express his knowledge and communicate his ideas in a convincing, persuasive, and effective manner. Oratory is the ability to arouse the will of the hearer to act in a given direction. By culture the voice is made rich, powerful, and flexible, the body trained to aid in the expression of thought and emotion, and

the mind trained to quick, clear, and logical thinking. This course includes voice culture, chest cultivation, deep breathing, gesticulation, self-control, extemporaneous speaking, argumentation, debating, and brief drawing.

COURSES IN DEPARTMENT OF ARTS AND SCIENCES

Students taking a full course for a degree may be admitted, without additional fee, except matriculation and laboratory fees, to courses for which they are qualified, in the Department of Arts and Sciences.

EXAMINATIONS.

Written examinations will be required upon each subject specified in the courses and will be conducted at the conclusion of each subject. At the close of the third year a general review and examination may be had. The standing of the student upon the several examinations and in the class conferences, the regularity of his attendance, and his character and legal attainments will determine his right to the degree.

DEGREE OF BACHELOR OF LAWS.

The degree of Bachelor of Laws will be conferred upon students who shall have passed satisfactory examinations upon the subjects required in the entire course of three years and whose attendance and conduct have been satisfactory to the Faculty.

PRIZES.

A prize of \$100, called "The Parker Prize," in honor of its donor, the Hon. Myron M. Parker, is awarded each year to the student who attains the highest general average in examinations during the full three years' course for the degree of Bachelor of Laws.

A prize offered by the Edward Thompson Company, of a set of the *Encyclopædia of Law*, first or second edition, or a set of the *Encyclopædia of Pleading and Practice*, is awarded each year to the regular law student who shall write the best thesis on some legal subject to be assigned by the Faculty.

Three prizes—one of \$40, one of \$30, and one of \$20—are annually given to the respective authors of the best three essays handed in by such members of the Third Year Class as shall compete for them and shall pass a successful examination.

A prize of \$25 in gold, called the "David S. Hendrick Memorial Prize in Insurance Law," in honor of Mr. David S. Hendrick, will be awarded each year to the student in the Second Year Class who writes the best essay upon some question in Insurance Law which will be selected and approved by the Faculty.

A prize of \$25 in gold, offered by Mr. Fritz von Briesen, called the "Ellsworth Prize," is awarded for the best work done in the Patent Law Course by a student receiving the degree of Master of Patent Laws.

Two prizes for excellence in debate are awarded by the Debating Society.

PRIZE AWARDS, 1902.

M. M. Parker Prize	G. Carroll Todd.
Edward Thompson Company Prize . .	Tyler A. Baker.
First Essay Prize	George W. Burton.
Second Essay Prize	Herman A. Teufel.
Third Essay Prize	Corridon H. Trickey.
Hendrick Insurance Prize	Hubert B. Fuller.
First Debater's Prize	William F. Adams.
Second Debater's Prize	Harold J. Pack.

LAW LIBRARY AND READING ROOM.

A well-equipped working library, comprising 4,000 volumes, is open to the students in Law Lecture Hall from 9 a. m. to 10 p. m. Competent librarians are in charge and will give students assistance in looking up subjects and in the use of books.

The library contains the standard text-books, the West Reporter system of Federal and State decisions complete, State Reports, the English Common Law and Chancery Reports, Encyclopædias of Law, Digests, reference books, and current law publications.

Adjoining the Library is a conversation room for students, affording opportunity for consultation.

In addition to these facilities, the students have free access to the great Congressional Library and other public libraries in the city.

ADMISSION TO THE BAR.

By the rules of the Supreme Court of the District of Columbia, applicants for admission to the Bar are required to have studied

law for three years under the direction of a competent attorney, but by those rules the course in the Department of Law of the University is regarded as discharging this requirement.

FEEES.

The tuition fee for the regular course is one hundred dollars per year of eight months; this to be paid in advance, monthly or quarterly, at the option of the student. The tuition fee for the Patent Law course is forty dollars; for the course in Oratory fifteen dollars. A charge of ten dollars in all cases is made for diplomas, and two dollars for library fee each year. Board and lodgings, including heat and light, can be obtained in the city at prices ranging from five dollars per week upward.

A student who withdraws from the Department of Law in the course of an Academic year is required to give immediate notice to the Registrar of the University.

No deduction from the full year's fees will be made in the case of a student withdrawing in the course of a year unless he gives this notice.

Graduates of the Department of Law with the degree of Bachelor of Laws are admitted without examination to the Department of Jurisprudence and Diplomacy for the degrees of Master of Laws, Doctor of Civil Law, and Master of Diplomacy.

For catalogues and further information, address

CHANNING RUDD, *Secretary,*
1420 H Street, Washington, D. C.

NOTE.—*The names and addresses of students enrolled for the year 1902-'03 will be given in the May bulletin.*

Department of Jurisprudence and Diplomacy.

GRADUATE COURSE.

BOARD OF VISITORS.

- Hon. MELVILLE W. FULLER, LL. D.,
Chief Justice of the United States.
- Hon. JOHN HAY, LL. D.,
Secretary of State.
- Hon. LYMAN J. GAGE, LL. D.,
Formerly Secretary of the Treasury.
- Hon. HENRY B. BROWN, LL. D.,
Associate Justice of the Supreme Court of the United States.
- Hon. CHAUNCEY M. DEPEW, LL. D.,
United States Senator from New York.
- Hon. JOHN F. DILLON, LL. D.,
Formerly Judge of the Circuit Court of the United States.
- Hon. WILLIAM LINDSAY, LL. D.,
Formerly United States Senator from Kentucky.
- Hon. FRANK A. VANDERLIP,
Formerly Assistant Secretary of the Treasury.

THE FACULTY.

- CHARLES W. NEEDHAM, LL. D., President of the University,
Transportation and Interstate Commerce Law.
- Hon. JOHN M. HARLAN, LL. D. (Associate Justice of the Supreme Court
of the United States),
Constitutional Law and Comparative Constitutional Law.
- Hon. DAVID J. BREWER, LL. D. (Associate Justice of the Supreme Court
of the United States),
International Public Law.
- Hon. JOHN W. FOSTER, LL. D. (Ex-Secretary of State),
Diplomacy and Treaties of the United States; Duties of
Ambassadors, Ministers, and Consuls; Boards of Arbitration.
- Hon. DAVID J. HILL, LL. D. (Assistant Secretary of State),
European Diplomacy and Treaties.

- HON. HANNIS TAYLOR, LL. D. (Formerly Minister to Spain),
Constitutional and Common Law of England and International Private Law.
- HON. WILLIAM WIRT HOWE, LL. D. (of the New Orleans Bar),
Ancient Law, Roman Law, Mediæval and Modern Civil Law.
- JOSEPH FRENCH JOHNSON, A. B. (of the University of New York),
Money, Credits, and Foreign Exchange.
- HON. MARTIN A. KNAPP, LL. D. (Chairman Interstate Commerce Commission),
Interstate Commerce Law.
- HON. CARROLL D. WRIGHT, LL. D. (Commissioner of the Department of Labor),
Statistics and Social Economics.
- CHARLES C. SWISHER, PH. D.,
Comparative Politics and Political Geography.
- JOHN W. HOLCOMBE, M. DIP.,
Assistant Professor, Comparative Politics.
- CHARLES RAY DEAN, M. DIP.,
Assistant Professor, European Diplomacy.
- ORMSBY MCHARG, D. C. L.,
Assistant Professor, Roman Law.

SPECIAL LECTURES.

- HON. LYMAN J. GAGE, LL. D. (Formerly Secretary of the Treasury),
Public Finance, Money, and Credits.
- EDWARD M. GALLAUDET, PH. D., LL. D. (President and Professor of
Moral and Political Science, Gallaudet College),
The Treatment of Enemy Property on the Sea.
- EDWARD H. STROBEL, LL. B. (of Harvard University),
Jurisprudence of France and of Spain.
- N. W. HOYLES, Q. C. (Principal of Toronto Law School),
Jurisprudence of Canada.
- GUY CARLETON LEE, PH. D. (Johns Hopkins University),
Comparative Politics.
- ROLAND P. FALKNER, PH. D. (The Library of Congress),
Monetary History.
- HON. OSCAR P. AUSTIN (Chief of Bureau of Statistics),
Interstate and Foreign Commerce.

DEPARTMENT OF JURISPRUDENCE AND DIPLOMACY. 157

JOHN FRANKLIN CROWELL, PH. D., L. H. D. (Treasury Bureau of Statistics),

International Trade and Commercial Geography.

EDGAR BUXTON,

Assistant Librarian and Assistant to the Secretary.

ELMER L. MOULDEN,

Assistant Librarian.

CHANNING RUDD, D. C. L.,

Secretary and Librarian of the Departments of Law,
Jurisprudence and Diplomacy.

HISTORICAL.

At the annual meeting of the Board of Trustees of the University in June, 1898, an ordinance was adopted establishing, as a department of the University, the Department of Jurisprudence and Diplomacy.

This Department was opened with appropriate ceremonies at the University November 15, 1898. President McKinley and members of his Cabinet, with many other distinguished men in public life, were present. Addresses were delivered by B. L. Whitman, D. D., President of the University; Charles W. Needham, LL. D., Dean; Hon. John M. Harlan, LL. D., Associate Justice of the Supreme Court of the United States; Hon. David J. Brewer, LL. D., Associate Justice of the Supreme Court of the United States; Hon. Lyman J. Gage, Secretary of the Treasury; Sir Wilfrid Laurier, Premier of Canada, and Hon. John W. Foster, ex-Secretary of State.

On January 3, 1899, Law Lecture Hall was completed and dedicated. This building is located at 1420 H Street, adjoining University Hall; it is very complete, having three lecture-rooms, a large library, and ample office rooms, the entire building being devoted to the use of the Departments of Law, Jurisprudence and Diplomacy.

OBJECTS.

This Department is designed to afford a training in the subjects of higher legal knowledge, the political history of the world, the science and practice of diplomacy, and international law.

Its courses are intended for lawyers, for students of jurisprudence and diplomacy, for persons who desire to fit themselves for the public, diplomatic, and consular service of the United States, and for those who desire a broad culture upon the larger questions of public life in order that they may better acquit themselves as journalists, legislators, and molders of public opinion upon the national and international issues of the day. To be an international lawyer or diplomatist one must, in addition to an education which makes one a scholar and lawyer, have special knowledge of the higher and broader subjects of the law and the intercourse between states and nations; to be influential in any public career a man in this day must have a knowledge of political history, the diplomatic relations which have existed between states and nations, the manner in which international controversies have been settled, the currents of international trade and commerce, the general principles of finance as held by civilized nations, and the modern methods of settling international affairs. It is the special object and purpose of this Department to furnish such instruction and opportunities for study at the national capital, where are to be found the archives containing the history of these subjects and the men who have been called to public life by reason of their special fitness to deal with these questions. From among these public men our professors and lecturers are chosen, and these archives and libraries are open to our students.

ADMISSION.

Applicants who have taken the degree of Bachelor of Laws in this or any other university or law school requiring three years of study will be admitted to the first year of the course as candidates for the degree of Master of Laws.

Applicants who have taken the degree of Bachelor of Arts, Bachelor of Science, Bachelor of Philosophy, or Bachelor of Laws in the Columbian University or any other university requiring an equal amount of study for the degree, and all others who have done work equivalent to that required for either of these degrees, and who pass a satisfactory examination before the Faculty of the Department, are entitled to admission to the course as candidates for the degree of Master of Diplomacy or the degree of Doctor of Civil Law.

Satisfactory evidence of degrees taken or equivalent work done will be required in all cases.

Any person approved by the Dean may attend one or more

courses of lectures in the Department, have the benefit of the examinations, and receive a certificate for the work done.

LANGUAGES. A knowledge of Latin is regarded as essential in both of the law courses to enable students to properly pursue the history of the law. In addition to Latin, one of the modern languages, either French, German, or Spanish, will be required of applicants for the degree of Doctor of Civil Law, and a knowledge of either French, German, or Spanish will be required of those taking the degree of Master of Diplomacy. Students who have not received sufficient instruction in the languages required may take the same during their course, in the Department of Arts and Sciences.

COURSES OF INSTRUCTION.

SPECIAL LECTURES.

Special lectures upon the jurisprudence of England and her Colonies, Germany, Austro-Hungary, Italy, and Colonial Law will be announced during the year.

A course of lectures upon the Organization of the Diplomatic Service of Other Nations, the History of International Conventions, and the Lives of Great Men will be delivered by some of the Diplomatic Corps resident in Washington and by other distinguished public men.

ASSIGNMENTS.

First Year.

Constitutional Law of the United States. One hour.* Professor HARLAN. *Story on the Constitution.*

Comparative Constitutional Law. One hour, one-half year. Professor HARLAN.†

International Public Law. One hour. Professor BREWER. *Hall.*

International Private Law. One hour, one-half year. Professor TAYLOR. *Minor's Conflict of Laws.*

Roman Law. One hour, one-half year. Professor HOWE. *Studies in the Civil Law.—Howe.*

Transportation and Interstate Commerce Law. Two hours. Professor NEEDHAM.*

* Unless otherwise stated, hours per week throughout the year.

† No text-book.

History of Diplomacy and Treaties of the United States. One hour, one-half year. Professor FOSTER. *A Century of American Diplomacy.*—Foster.

Statistics and Social Economics. One hour. Professor WRIGHT. *Practical Sociology.*—Wright.

Comparative Politics and Political Geography. One hour. Professor SWISHER.*

Administrative Law.* One hour, one-half year.

Class Conference, Comparative Politics. One hour. Assistant Professor HOLCOMBE.

Class Conference, Roman Law. Two hours. Assistant Professor MCHARG.

Latin, French, German, and Spanish. (Special.)

Elective Courses. (See Department of Law Catalogue.)

Common Law Pleading.

Equity Pleading and Practice.

Testamentary Practice and Pleading.

Legal Ethics, and the Preparation, Trial, and Argument of Cases.

Moot-Court Work.

Five hours each week will be devoted to class discussions and conferences, conducted by professors and instructors.

Second Year.

Practice of Diplomacy, Organization of the State Department, Duties of Ambassadors, Ministers, and Consuls, and International Arbitration.* One hour. Professor FOSTER.

History of European Diplomacy and Treaties.* One hour. Professor HILL.

Laws of Ancient Nations.* One hour.

(a) History and General Principles of the Laws of India, Egypt, Palestine, and Greece. Professor Howe.

(b) A General View of the Law in Europe during the Middle Ages. Professor Howe.

* No text-book.

Roman Law.* One hour.

(a) History and General Principles of Roman Law to and including the time of Justinian. Professor HOWE.

(b) The Extension of the Roman Law into some of the Modern States. Professor HOWE.

The Common Law of England; its History and Extension into some of the Modern States. One hour. Professor TAYLOR.

Jurisprudence of France and Spain. Professor STROBEL.

Jurisprudence of Canada. Professor HOYLES.

International Public Law.* One hour, one-half year. Professor BREWER.

Interstate Commerce Law. One hour, one-half year. Professor KNAPP.

International Trade and Commercial Geography.* One hour, one-half year. Professors AUSTIN and CROWELL.

Finance.* One hour. Professor JOHNSON.

Comparative Politics. One hour. Professor SWISHER.

Class Conference, Comparative Politics. One hour. Assistant Professor HOLCOMBE.

Class Conference, European Diplomacy. One hour. Assistant Professor DEAN.

Latin, French, German, and Spanish. (Special.)

Special Lectures, Class Discussions and Conferences. Five hours.

The class-room work for each year will occupy about ten hours—two hours every week day except Saturday.

COURSES.

LAW SECTION.—Leading to the degree of Master of Laws. One year.

I. Required Course.

Constitutional Law of the United States.

International Public Law.

International Private Law.

* No text-book.

Roman Law.
 Transportation and Interstate Commerce Law.
 Comparative Politics.

2. Elective Course.

Comparative Constitutional Law.
 Administrative Law.
 Colonial Law.
 Common Law Pleading.
 Equity Pleading and Practice.
 Testamentary Practice and Pleading.
 Legal Ethics and the Preparation, Trial, and Argument of Cases.
 Moot-Court Work.

NOTE.—Students in this course may take the Moot-Court work and other courses in the Department of Law without extra charge.

LAW SECTION.—Leading to the degree of Doctor of Civil Law.
 Three years.

1. Required Course, first year.

Constitutional Law of the United States.
 Comparative Constitutional Law.
 International Public Law.
 International Private Law.
 Roman Law.
 Transportation and Interstate Commerce Law.
 Comparative Politics.

2. Elective Course.

History of Diplomacy of the United States.
 History of Treaties to which the United States has been a party.
 Administrative Law.
 Political Geography.
 Colonial Law.
 Statistics and Social Economics.
 Latin and French, German, or Spanish (special).

3. Required Course, second year.

Comparative Politics.
 Laws of Ancient Nations.
 Laws of India, Egypt, Palestine, and Greece.
 General View of the Law in Europe during the Middle Ages.

Roman Law.

Roman Law to and including the time of Justinian.

The Extension of the Roman Law into some of the Modern States.

Common Law of England; its History and Extension into some of the Modern States.

Jurisprudence of France and Spain.

International Public Law.

Interstate Commerce Law.

4. Elective Course.

Practice of Diplomacy of the United States.

International Arbitration.

History of European Diplomacy and Treaties.

International Trade.

Finance.

Latin and French, German, or Spanish (special).

5. Third Year.

Elective courses and review.

Preparation of Thesis.

(Attendance optional, and one-half tuition only is charged for this year.)

DIPLOMATIC SECTION.—Leading to the degree of Master of Diplomacy. Two years.

1. Required Course, first year.

Comparative Politics and Political Geography.

History of Diplomacy of the United States.

History of Treaties to which the United States has been a Party.

International Public Law.

Commercial Geography.

Statistics and Social Economics.

2. Elective Course.

Constitutional Law of the United States.

Comparative Constitutional Law.

International Private Law.

Administrative Law.

Colonial Law.

French, German, or Spanish (special).

3. Required Course, second year.

Comparative politics.
Practice of Diplomacy of the United States.
Organization of the State Department.
Duties of Ambassadors, Ministers, and Consuls.
International Arbitration.
History of European Diplomacy and Treaties.
International Public Law.
International Trade and Commercial Geography.
Finance.

4. Elective Course.

Laws of Ancient Nations.
Common Law of England.
Course in Comparative Jurisprudence.
French, German, or Spanish (special).

METHOD OF INSTRUCTION.

Professors conduct the study of the subject to which they are assigned by lectures, required courses of reading, and class discussions and conferences. Where a subject is divided into different branches or subdivisions, special lecturers are introduced who are specially qualified to speak upon the subject assigned.

All subjects are studied historically and comparatively and with a view to arriving at the present conditions and state of the law.

Class discussions and conferences follow each lecture, and students are encouraged to make original research and report their work to the class.

COMPARATIVE JURISPRUDENCE. This course begins with the study of the laws of primitive people, the laws of India, Egypt, Palestine, and Greece. Following this is a study of the Roman Law as derived from Greece and developed in Rome itself, down to the time of Justinian; then a general view of the law in Europe during the Middle Ages and tracing the Roman Law to the modern nations in which it now prevails. The rise of the Common Law and its extension to the nations in which it prevails are carefully considered, and then the jurisprudence of the great modern States is studied, giving to each a special lecture course, with class discussions. The relations of England to her colonial empire and the federal system existing in Canada receive special attention. All statutory laws which

have a bearing upon the exercise of national power and which affect the relations of nations with each other, as well as the fundamental law, are studied in each course.

This subject is under the general supervision of the Dean, and lecturers are appointed upon the jurisprudence of each nation.

COMPARATIVE CONSTITUTIONAL LAW. This subject is studied by first considering in a thorough and comprehensive manner the subjects and the scope of the Constitution of the United States; next taking the constitutions of other nations, studying their sources and subjects, comparing their provisions in the light of judicial interpretation by the highest courts of the country with the Constitution of the United States as construed by the Supreme Court of the United States, giving the student a thorough knowledge of the statement of constitutional law in various countries, the scope of each, the subjects treated, the judicial construction, and the points in which our Constitution differs from that of other nations.

INTERNATIONAL LAW. This subject is studied with reference to its sources, its sanctions, its present condition, and the lines and scope of its probable development.

HISTORY OF DIPLOMACY AND TREATIES OF THE UNITED STATES. The course of lectures on American Diplomacy embraces the duties of ambassadors and ministers; duties of consuls; treaties, their method of negotiation, various forms of, attitude of Congress, rulings of Supreme Court, and historical sketch of most important American treaties; arbitration, principles of, organization and method of procedure; and the Monroe doctrine.

HISTORY OF EUROPEAN DIPLOMACY AND TREATIES. Approaching diplomacy not merely as the science of the relations of sovereign States and the art of conducting negotiations between them, but primarily as the actual transaction of international business, the course of instruction aims to show what European diplomacy really is by the examination of its history. As all important international transactions are summed up and embodied in definite treaties and conventions, the subject can be most profitably discussed by an analysis of these documents, supplemented by an account of the persons, interests, events, forms, ceremonies, and negotiations that have contributed to their development. By this method it is hoped that it may be possible not only to derive inductively the principles of diplomacy as an art and as a science, but also to

present an exposition of the present international relations of Europe as determined by the great treaties, from the Congress of Westphalia to the Congress of Berlin, showing the existing affinities, antagonisms, and tendencies of the chief European powers.

COMPARATIVE POLITICS; POLITICAL GEOGRAPHY IN ITS RELATION TO POLITICAL HISTORY. The work in this department is designed to put the student in possession of the main results of political development, enabling him to follow the course of history, both in its geographical and in its political movement, with special reference to the structure and influence of the States whose work has been worth most to the world.

FINANCE. This subject is treated broadly with reference to international relations in commerce and banking. It considers the nature and functions of money and credits and their international circulation; also the subject of Public Finance, including the sources of government revenues, bond issues, taxation, the disbursement of the revenues, and the organization of the Treasury Department.

INTERNATIONAL TRADE AND COMMERCIAL GEOGRAPHY. This course treats of the products of the United States which are the subjects of international trade; where like products are grown or manufactured, and the markets for the same, giving the general currents or geography of trade and commerce and showing how affected by treaties and legislation, and the services of diplomatic and consular agents of the United States.

TRANSPORTATION AND INTERSTATE COMMERCE LAW. This subject is treated historically, beginning with the public highway, the use of navigable waters, and the construction and operation of canals and railroads; observing the rights of the public; the relations of owners of railroads to the management and the public; theory and practical working of competition and combination; legislative control, and reviewing the Interstate Commerce Law and the decisions thereunder.

STATISTICS AND SOCIAL ECONOMICS. The aim is to teach the principles, theory, and practice of the statistical method, illustrating its use and abuse in presenting data relating to population, production, commerce, wages, prices, crime, etc. Under social economics the course deals with principles of social economics, elements of industrial society, systems of industry, evolution of manufactures, the factory system, the regulation of labor, strikes, arbitration, effects of machinery, prison labor, coöperation, savings institutions, labor legislation, labor organizations, socialism, etc., etc.

ORATORY.

There are classes in oratory under the charge of Professor Channing Rudd. The purpose of this course is to qualify the student to express his knowledge and communicate his ideas in a convincing, persuasive, and effective manner. The course includes voice culture, chest cultivation, deep breathing, gesticulation, self-control, extemporaneous speaking, argumentation, debating, and brief drawing. The aims are to culture the voice and make it rich, powerful, and flexible; making the bodily movements aid the expression of thought and emotion, and training the mind to quick, clear, and logical thinking.

COURSES IN DEPARTMENT OF ARTS AND SCIENCES

Students taking a full course for a degree may be admitted, without additional fee, except matriculation and laboratory fees, to courses for which they are qualified, in the Department of Arts and Sciences.

DEGREES AND THESES.

The degree of Master of Laws is conferred upon students taking the prescribed course and passing the required examinations.

The degrees of Master of Diplomacy and Doctor of Civil Law are conferred upon students who take the courses prescribed therefor, pass the required examinations, and submit satisfactory and creditable theses.

Theses are required of all students who are candidates for the degrees of Master of Diplomacy and Doctor of Civil Law upon subjects selected by the student and approved by the faculty. The thesis must represent independent thinking and research, and must not be a mere essay or compilation of facts. It must consist in the reasoned presentation of some distinct proposition—not a mere common-place of knowledge—and adapted to illustrate the writer's familiarity with some field of inquiry, his comprehension of the subject chosen, his acquaintance with the sources of information relating to the theme, his power of clear and coherent statement, his capacity for logical arrangement of ideas, and his ability to establish by proof the position he defends. The value of the student's effort will be judged by its exhibition of the qualities above mentioned rather than by its length; but the treatment should be sufficiently extended to furnish evidence of serious investigation and sus-

tained thinking. Clearness and correctness of style are essential, but mere ornament is superfluous. An analytical outline of the argument and the exact citation of authorities, with precise references, are expected. The thesis must be prepared and printed at the expense of the student, as may be required by the faculty, and shall become the property of, and remain with, the Department.

The standing of the student in all the courses, the regularity of his attendance, and his character and legal attainments will determine his right to the degree.

EXAMINATIONS.

Written examinations are held at the conclusion of each course of study, and a record is kept of the standing of the students in class conference work.

PRIZE.

A prize, offered by the Edward Thompson Company, of a set of the *Encyclopædia of Law*, first or second edition, or a set of the *Encyclopædia of Pleading and Practice*, is awarded to the student in this Department who shall write the best essay on some legal subject, to be assigned by the Faculty.

PRIZE AWARD, 1902.

Edward Thompson Company Prize . . James David Talbott.

LAW LIBRARY AND READING ROOM.

A well-equipped working library, comprising 4,000 volumes, is open to the students in Law Lecture Hall from 9 a. m. to 10 p. m. Competent librarians are in charge and will give students assistance in looking up subjects and in the use of books.

The library contains the standard text-books, the West Reporter System of Federal and State decisions complete, State Reports, the English Common Law and Chancery Reports, *Encyclopædias of Law*, Digests, reference books, and current law publications.

Adjoining the Library is a conversation room for students, affording opportunity for consultation.

In addition to these facilities, the students have free access to the great Congressional Library and other public libraries in this city.

FEES.

The tuition fee is one hundred dollars for each year, payable in advance, monthly or quarterly, at the option of the student. For the third year in the course for the degree of D. C. L. one-half tuition will be charged.

The tuition fee for the course in Oratory is fifteen dollars.

Printed synopses and publications issued in connection with the work are furnished to students at cost.

Students proposing to withdraw from the Department of Jurisprudence and Diplomacy will inform the Registrar to that effect. In the absence of such notification no claims for exemption from fees will be allowed.

Students taking special courses only are charged fifteen dollars for each subject.

The fee for diploma is ten dollars, and a library fee of two dollars per year is charged.

For further information and application blanks for admission, address

CHANNING RUDD, *Secretary*,
1420 H Street, Washington, D. C.

NOTE.—*The names and addresses of students enrolled for the year 1902-'03 will be given in the May bulletin.*

Degrees.

At the Commencement in June, 1902, degrees were conferred as follows :

Bachelor of Arts.

Bertha Winifred Clark.	Luther Adolph Richards.
Lola May Evans.	Paul Sperry.
Lucina Frances McGroarty.	Mary Elsie Turner.

Bachelor of Science.

Mary Elizabeth Ford.	Herbert Louis Solyom.
Josephine Power Shallenberger.	Douglas Bovard Sterrett.

Bachelor of Science in General Science.

Victor Levi Dodge, LL. B., LL. M. George Henry Sensner.

Bachelor of Science in Civil Engineering.

Earl Gordon Marsh.

Bachelor of Science in Electrical Engineering.

Isaac Allison.	Louis Edward Giles.
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Bachelor of Science in Chemistry.

Leroy Mahler Law.

Bachelor of Science in Language and Literature.

Sara West.

Master of Arts.

<p>Harry Frye Best, A. B., Centre College. <i>Thesis</i>: Municipal Ownership of Street Railways.</p> <p>Charles Allcott Flagg, A. B., Bowdoin College. B. L. S., New York State Library School. <i>Thesis</i>: Administration of Lord Cornbury as Governor of New York, 1702-1708.</p> <p>Carl Hau, University of Freiberg. <i>Thesis</i>: Niccolo Machiavelli and Cesare Borgia.</p> <p>Ida Hinman, B. S., Iowa Wesleyan University. <i>Thesis</i>: The Influence of the Bible on Shakespeare as illustrated by the English Historical Plays.</p>	<p>Motoshi Kato, B. A., Tokyo College; Senshu College. <i>Thesis</i>: A View of the Branch Banking System.</p> <p>John Royce Laughlin, B. S., Maryland Agricultural College. <i>Thesis</i>: Some of the Factors Tending to Postpone the Point of Diminishing Return in Intensive Agriculture.</p> <p>Rev. Robert Kinloch Massie, <i>Thesis</i>: The Character and Influence of Henry VIII.</p> <p>Rev. Benjamin Perry Robertson, M. A., Judson College. Th. M., Southern Baptist Theological Seminary. <i>Thesis</i>: The Messianic Element in the Psalms.</p>
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Master of Arts—Continued.

Nathaniel Emmons Robinson, Jr.,
B. A., Columbian University.
Thesis: A Study of American Literature, 1760-1860.

Georgia Sanderlin,
B. A., Columbian University.
Thesis: The Sentence as an Element of Style.

Dorothy Holland Sipe,
A. B., Bryn Mawr College.
Thesis: Epithets of the chief Gods and Goddesses in the Homeric Poems.

Helen Mary Thorburn,
A. B., University of Tennessee.
Thesis: Studies of Paragraph Structure in English Prose of the Sixteenth and Seventeenth Centuries.

Gideon Baxter Travis,
B. S., Kalamazoo College.
B. S., University of Chicago.
Thesis: Relation of the Executive to the Legislative in the English Government.

Master of Science.

Archibald Webster Brown,
B. S., Columbian University.
Thesis: Train Shed for a Terminal Station.

Calvin Grant Church,
B. S., Maryland Agricultural College.
Thesis: Composition of the Banana.

Caroline Irene Griesheimer,
LL. B., LL. M., Washington College of Law.
Thesis: Civil-service Reform.

Eleanor Wilson Hance,
B. S., Columbian University.
Thesis: Industrial Education and Manual Training with Reference to the District of Columbia.

John Bernard Robb,
B. S., Maryland Agricultural College.
Thesis: Study of the Chemical Composition of the Chestnut.

Martin Norris Straughn,
B. S., Maryland Agricultural College.
Thesis: A Comparison of the Smyrna Fig Grown in California with Those Grown in Turkey (Asia).

Civil Engineer.

Lester Morton Holt,
B. S., Columbian University.
Thesis: Development of the Water Power on the Wallkill River, New York.

Mechanical Engineer.

Guy Bennett Marean,
B. S., Columbian University.
Thesis: Investigation of the Excessive Waste of an Electric Power Plant.

Edward Cyrus Thompson,
B. S., Columbian University.
Thesis: Test of a Triple-expansion Pumping Engine.

Doctor of Philosophy.

Rev. Frank Leighton Day,
B. A., M. A., Roanoke College.
B. D., Vanderbilt University.
Thesis: Did the Semites Pass Through a Totem Stage?

Nevil Monroe Hopkins,
B. S., M. S., Columbian University.
Thesis: Some Experiments on Electrolytic Conductivity with Reference to the Ion Theory.

Doctor of Dental Surgery.

William Carlisle Barr.
Frederick Isley Bartlett.
Samuel Tompkins Brown.
Arthur Birkhead Cooper.
George W. Cox, Jr.
Benjamin C. Jones.
Robert E. Layton.

Carl Joseph Mess.
Paul H. Miller.
John Craig Murdoch.
W. Ashford Reiss.
Thomas Locke Rust.
Henry Pennepacker Stevens.
Walter Watts.

Doctor of Medicine.

U. Grant Anderson.
 George M. Boyer.
 James Dick Bridger.
 William Conyngton.
 M. E. Costello.
 Oliver V. Emery, LL. B.
 Charles L. Foster, B. S.
 Samuel Fry.
 Edgar Yeager Gilchrist.
 Alfred Glascock.
 Almer Marcus Hoadley.
 Edward Clark Hudson,
 A. M., Ph. D. Columbia University.
 Henry Merrill Jewett.
 Edward Barton Jones, LL. M.
 Joseph Packard Laird.
 Richard Mitchell Little.
 Carl Lovelace, B. S.

Marcus Ward Lyon, Jr.,
 Ph. B., Brown University.
 M. S., Columbian University.
 Ernest Pendleton Magruder.
 A. B., Johns Hopkins University.
 A. M., Columbian University.
 Alexander Murray.
 Alexander T. Nelson.
 Charles Wilson Parsells.
 Henry F. Pipes.
 Francis Herbert Poole.
 Harry Martin Price.
 Robert Cathcart Ransdell.
 Joseph D. Rogers.
 William I. Robey.
 H. Cowles Rucker.
 George M. Ruffin.
 Kenneth Beymer Turner.
 James Hollingsworth Williams.

George Welch Wimberly.

Bachelor of Laws.

John Henry Altschu,
 A. B., Columbian University.
 Tyler Alexander Baker.
 Harry Amasa Barber.
 John Howard Barnes.
 Fountain Fox Beattie.
 Benjamin Wexler Beck,
 B. S., Chattanooga Normal University.
 Eugene Benton Berry.
 John Franklin Bethune.
 John Stirling Boatner, Jr.,
 A. B., Tulane University.
 Edgar Marshall Bowker.
 George William Burton.
 Frank Graham Butts.
 Morgan R. Cartwright,
 A. B., Trinity College.
 John Gray Challice.
 George Griffith Chase,
 B. S., Columbian University.
 Charles Wolverton Clement,
 B. S., Bucknell University.
 Thomas C. Clendening,
 Ph. B., University of Chicago.
 Richard Colbert.
 Archer Parris Cram.
 Patrick Daniel Cronin,
 A. B., Boston College.
 John Homer Deis.
 Thomas Howard Duckett.
 Andrew B. Duvall, Jr.,

Fremont Evans.
 Ervin Edgar Ewell,
 B. S., University of Michigan.
 William S. Fitz Gerald.
 I. N. Fluckey.
 Isaac Clephas Foster.
 Wallace C. Franklin.
 Leon Le Lanne French.
 Frederick William Frick,
 A. B., A. M., Central Wesleyan College.
 Harry Summers Garner.
 Christie Seymour Goshert.
 James Harwood Graves.
 Edwin Booth Haas.
 De Witt T. Hartwell.
 Albert P. Heess.
 Barend P. Holzberg.
 James Edwin Hutchinson, Jr.
 Harry Hyman.
 Charles Carrington Lamborn.
 J. Roy Lilley.
 Carl J. Lockwood.
 Charles Augustus Macatee, Jr.
 Claude L. Mathewson.
 Charles David Mayer.
 George P. McCabe.
 Walter Anderson McNeil.
 Claude Frank Morris.
 William Longfellow Morris.
 James Francis H. Mothershead.
 George Bliss Nelson,
 B. L., University of Wisconsin.

Bachelor of Laws—Continued.

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|----------------------------------|--------------------------------|
| George Eggborn Nelson. | Thomas Pettegrew Stewart, |
| James Lawson Norris, Jr., | A. B., Baker University. |
| A. B., Princeton University. | Howard A. Swallow, |
| Stuart Earl Oberlin. | A. B., Brown University. |
| John Alonzo Pace. | Granville Richard Swift, |
| Harold Jackson Pack. | B. A., Fredericksburg college. |
| Perry Spencer Pearson, | Eugene Henry Taggart. |
| A. B., Mercer University. | Herman A. Teufel. |
| M. A., Columbian University. | Ward Eginton Thompson. |
| Stanton Canfield Peelle, | George Carroll Todd, |
| A. B., Columbian University. | B. S., Columbian University. |
| Eugene H. Pitcher. | Edwin Briggs Hale Tower, Jr. |
| Frank G. Radelfinger, | Corridon Heath Trickey. |
| B. S., University of California. | John Theodore Twohey. |
| Richard Galt Rawlings. | Henry Vanderbilt Tulloch, |
| John David Rhodes. | A. B., Princeton University. |
| Frank Stuart Robinson, | George Oakley Vass. |
| A. B., Iowa Wesleyan University. | Burtran William Vincent. |
| Clyde Leland Rogers, | Robert L. Williams. |
| A. B., Alfred University. | Sidney Stuart Wilson. |
| Herbert R. Sands. | Thomas Benton Wilson. |
| Christian Senft. | Charles Frederick Yauch. |
| Lacey Moore Simpson. | George Faust Youmans, |
| William C. Stevenson | B. S., University of Missouri. |

Master of Patent Laws.

- | | |
|--------------------------------------|---|
| Eugene C. Brown, | Edgar Morlan Kitchin, |
| B. E., Lehigh University. | LL. B., Georgetown University. |
| LL. B., National Law School | LL. M., National Law School. |
| George Frederick De Wein, | Grafton Louis McGill, |
| M. E., Cornell University. | LL. M., Georgetown University. |
| LL. B., National Law School. | Charles Howard Morgan, |
| William F. Freudenreich, | B. E., Lehigh University. |
| B. S., Rose Polytechnic Institute. | LL. B., LL. M., National Law School. |
| LL. B., National Law School. | William Longfellow Morris. |
| Joseph William Howell, | William James Rich, |
| LL. B., Columbian University. | S. B., Massachusetts Institute of Tech- |
| John E. Hubbell, | nology. |
| B. S., Rose Polytechnic Institute. | LL. M., Georgetown University. |
| LL. B., National Law School. | John Hiram Ruckman, |
| William Steell Jackson, | B. S., University of Michigan. |
| B. E., Lehigh University. | LL. B., National Law School. |
| LL. B., LL. M., National Law School. | Julian Scott Wooster. |
| Benjamin Robert Johnson, | LL. B., Columbian University. |
| A. B., Hamilton College. | |
| LL. B., Georgetown University. | |

Master of Laws.

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|---------------------------------------|-------------------------------------|
| William Abbe, | Alfred Alvarez Calderón, |
| A. B., Harvard University. | LL. B., San-Marcos University, Lima |
| LL. B., Columbia University. | Peru. |
| Emma Reba Bailey, | Lewis Colfax Conwell, |
| LL. B., LL. M., Washington College of | LL. B., Columbian University. |
| Law. | |

Master of Laws—Continued.

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| Orlan Clyde Cullen,
C. E., St. Paul College. | Henry Floyd Samuels, |
| Edwin Carpenter Dutton,
LL. B., Washington College of Law. | Charles Edwin Smith,
B. S., LL. B., Central Normal College. |
| John K. Hench,
LL. B., Columbia University. | Robert Allan Stephens,
LL. B., Columbia University. |
| Samuel Herrick,
LL. B., Columbia University. | James David Talbott,
LL. B., Columbia University. |
| William Hinton Holloway,
LL. B., Columbia University. | Haskell Burlason Talley,
LL. B., Vanderbilt University. |
| Patrick Henry Loughran,
LL. B., Georgetown University. | Luther Mason Walter,
LL. B., Columbia University.
B. E., N. Y. University. |
| George Xavier McLanahan,
A. B., Yale University.
LL. B., Harvard University. | Richard Montgomery Webster,
LL. B., National Law School. |
| David Solomon Phares,
LL. B., Indianapolis College of Law. | Marion Stange Wilson,
B. S., Willamette University.
LL. B., Cumberland University. |

Master of Diplomacy.

- | | |
|--|--|
| Leroy Stafford Boyd,
B. S., M. S., Alabama State College.
LL. B., Tulane University.
D. C. L., Columbia University. | J. William McKinley,
LL. B., LL. M., D. C. L., Columbia University. |
| Ormsby McHarg,
LL. B., University of Michigan.
LL. M., D. C. L., Columbia University. | Yeijiro Nakatsuka,
LL. M., Columbia University. |
| | Richard M. Towson,
LL. B., LL. M., D. C. L., Columbia University. |

Doctor of Civil Law.

- | | |
|---|--|
| José Celerino Abreu,
A. B., Ateneo Municipal College, Manila, P. I.
LL. M., Columbia University. | Aubrey J. Kline,
LL. B., LL. M., Columbia University. |
| Fritz v. Briesen,
A. B., Harvard University.
LL. B., New York University.
LL. M., Columbia University. | William Ernest McClure,
A. B., University of Oregon.
LL. B., LL. M., Columbia University. |
| Timothy John Butler,
LL. B., University of Kansas.
LL. M., Columbia University. | Knighton Tupper Meade,
A. M., Allegheny College.
LL. M., Columbia University. |
| John Thomas Doyle,
LL. B., LL. M., M. Dip., Columbia University. | Hadly Winfield Quaintance,
A. B., University of Nebraska.
M. A., University of Illinois.
LL. B., Northern Illinois College.
LL. M., Columbia University. |
| Henry A. Gunderson,
LL. B., Columbia University. | Channing Rudd,
LL. B., Kansas City School of Law.
LL. M., Columbia University. |
| Everett Merrill Hawley,
LL. M., Columbia University. | Albert Rhett Stuart,
B. A., M. A., LL. B., LL. M., Columbian University. |
| Adolph E. L. Johnson,
LL. B., University of Minnesota.
LL. M., Columbia University. | Frank Tharin,
LL. B., LL. M., Columbia University. |
| Olie Lawrence Johnson,
LL. B., University of Wisconsin.
LL. M., Columbia University. | |

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1907

ADDRESS
OF
THE LIBRARIAN OF CONGRESS.

PRESIDENT NEEDHAM, LADIES AND GENTLEMEN :

To a librarian such an occasion as this is a tempting one. We are at the National Capital, under the shadow of a constitution, at the heart of a national system, based upon books; constructed—with some compromises!—upon discussion of the best models which books afford. We are under an administration whose first magistrate is a historian and man of letters, whose second—to go no further—is a man of letters and historian. We are in an era when men from academic life are being incessantly and increasingly drawn into the public service, and asked to bring to its problems judgments formed by the study of books. And the occasion itself is an academic one,—with every justification that that implies for eulogium of the power and of the instruction which through books are brought to us from the ages past and from the lands beyond our gate.

Such an occasion is, I say, for a librarian a tempting one; for an audience therefore perhaps a perilous one. And yet the choice of a librarian to deliver an address to a graduating class is singular. For you who are leaving the academic portals are supposed to be laying aside books. You are leaving them to take up life. At some institutions you would leave them in ashes: you would burn them, as things

whose utility, so far as you are concerned, has passed, and for whose recent tyranny you might now show your just contempt. You are about to enter upon life itself; and have no longer use for books, which give you life only at second hand. This occasion would then be the least appropriate for a panegyric upon books or an exposition of the uses of books. But I propose neither. I have been asked to say something to you not about books (though they are not forbidden), but about libraries; and not about libraries in general but about a particular system of libraries, the system which forms part of the laboratory equipment of your university itself. This may be to the purpose: for as alumni and alumnae, the interests of your university will be with you still a chief concern. You will wish to do all in your power to augment its resources: you will at least wish to be able to state with clearness and precision just what these resources are, in order that the university may secure a proper reputation for them, which will draw to its faculty men of strength and to its student-body men and women ambitious for the best. This will be your duty to it as graduates, your primary duty, and a small enough acknowledgment of the benefits which you have received from it.

I incline to take as text a passage from an unfamiliar book: perhaps the only book within your reach which you have not read during the past four years. It is the Catalogue of Columbian University. And the passage is that in the introduction entitled the "Educational Advantages of Washington." Part of it deals with the opportunities, at the Medical Museum and elsewhere, for the study of normal and morbid anatomy and of dental perfections and imperfections: matters of intimate concern, but not within my

field. Another part calls attention to the Government laboratories of science, whose methods offer a profitable field of study and whose apparatus is to some extent made available to student investigators. The most of it, however, consists of a statement of the library resources in Washington, with a reference to the Resolution of Congress, approved April 12, 1892, which makes such of them as are subject to the federal government "accessible * * * to students of any institution of higher education now incorporated or hereafter to be incorporated under the laws of Congress or of the District of Columbia." The resolution uses the term "collections," which includes much more than books: but every government institution or bureau mentioned contains a library, and the list starts off with the Library of Congress. The statement in the catalogue is clear; but I should like to expand it a little. The list includes but twelve institutions and bureaus. Twenty-two others supported by the federal Government have collections of books which under present practice are now in fact equally accessible to the student and to any serious investigator. There are thus in the city of Washington *thirty-four* governmental libraries freely available for research. These libraries now contain in the aggregate over two million books and pamphlets and over a half million other articles literary in character—manuscripts, maps, music and prints. If we add to them the contents of the District Library and of the libraries of private associations and institutions,—The Catholic University, Georgetown College, Columbian itself, and others,—we shall have a total not merely greater than is to be found in any other city of this size in the world; but one which in proportion to population represents several times as many volumes *per capita* as exist for public use in *any* other city of the world.

The character of these collections is still more significant. If you will take that catalogue of your university and will check through the list of courses you will find not one to the pursuit of which some governmental library cannot contribute; and only one to which the government fails to furnish a practically efficient, if not entirely complete, working library. (The exceptional course is Biblical literature: but even this may not require literary resources more elaborate than the needs of Congress have called for in the Library of Congress.) The most significant circumstance is, however, that of these thirty-four governmental libraries thirty-three exist for the purpose of developing each a collection within a particular field, while the thirty-fourth (the Library of Congress) as a national library is a library general in scope and has for its field *all* literature.

The library of each scientific bureau is seeking every book within its means which will aid to the work of that bureau. These libraries as a whole are thus developing in response to the needs of specialists and under their direction. Now the scientific work of the federal government in the bureaus touches almost every branch of the natural and physical sciences. The resulting collections of books are thus coming to be large and efficient special libraries covering most of the sciences which enter into the curriculum of a university. The student of medicine has accessible to him the Library of the Surgeon-General's office, which is not merely the largest but the most efficient medical library in the world. The student of the common law has in the library of the Supreme Court (a division of the Library of Congress) a collection of Statutes, Reports and Commentaries which is one of the largest in the United States, though for lack of space it can-

not for the present be fully efficient, nor even uniformly accessible. The student of the civil law, of international law, of comparative jurisprudence is not yet adequately provided for; but he is to be. The libraries of the Department of Agriculture, of the State, War and Navy Departments, of the Department of Justice, of the Bureau of Education, of the Geological Survey, of the Coast and Geodetic Survey, of the Patent Office, of the National Museum, of the Weather Bureau, of the Labor Bureau, of the Naval Observatory, represent each a collection specially constructed for specific and authoritative service within the particular field indicated by its title.

Of course the material accumulated in these collections will be primarily that which aids the investigations or bears upon the operations of the Government. But even thus it covers pretty nearly every division of pure science, the natural and physical sciences, law, medicine and mathematics. It does not cover the philosophical sciences, theology, philology, the fine arts or belles lettres; nor in any general way sociology. It touches technology only in the library of the Patent Office, and history chiefly in the library of the State Department. But all these subjects for one reason and another, and in particular because they are not covered by any other governmental collection, are a particular obligation upon the Library of Congress.

When the resolution of Congress took effect eleven years ago the Library of Congress was a huge but undigested mass of material, partly shelved, but in larger part in heaps, on the floor, in closets, in vaults, under stairways—700,000 volumes crowded into spaces in the aggregate capable of affording accessible accommodation for less than half that number.

It was not and could not be systematically classified; it had not and could not have complete or exact catalogues,—nor any catalogue accessible to the public. It lay in the Capitol—a building primarily for legislative uses. It was administered by a force of but forty-two persons, who were in addition charged with the entire copyright business—and had no adequate facilities for any part of their business, much less a margin of facilities which could give aid and comfort to a reader. The fund for increase was but \$10,000 a year.

Today the Library of Congress is a collection, including duplicates, of over 1,100,000 books and pamphlets and nearly half a million other articles. It is housed in a building devoted to its sole use: the largest library building in the world, the most commodious, the most efficient in equipment for the work which it has to do;—a building which provides for ample classification and display of the material, for reasonable growth and for a multitude and great variety of service;—a building which may accommodate a thousand readers at a time and differentiate them to their best advantage. As against forty-two employees for all purposes there are now in its service (including the force caring for the building, the Copyright Office, and the Branch bindery and printing office) four hundred and eighty-seven persons. From \$10,000 a year the funds for increase have risen to \$100,000 a year. The Library still receives without cost two copies of every book or other article entered under the copyright law; it has the benefit of the international exchanges of public documents; and it is the custodian of the library of the Smithsonian Institution—a superb collection of the publications of learned societies. The books are

shelved; and a modern, expansive system of classification is being applied to them. A card catalogue, not merely by authors, but also by subject, is being compiled, and as compiled is made available to the public. Reference lists and bibliographies of special subjects of current or of scholarly interest are being issued in book form and freely distributed. The Library has still Ainsworth Spofford and the other men who with him made the collection at the Capitol useful in spite of harassing conditions. And it has gained numerous other experts, including some who are in a different sense specialists—who have had specific training in the subject matter of various departments of knowledge. It has, for instance, such specialists in history, in economics, in theology, in philology, in chemistry, in physics, mathematics, astronomy, biology, ethnology, technology, music; competent linguists, of course (books are now being catalogued in over a hundred different languages and dialects); accomplished bibliographers; highly trained classifiers and cataloguers; experts in the art of making books useful, and whatever else goes to the technique of library administration—but also specialists.

This large force, except as it may be caring for the plant or directly busy with the reader, is engaged in systematizing the collection, in equipping it with efficient apparatus, and in aiding to develop it by wise choice of material to be purchased. To their counsel is added that of many users of the Library who are themselves specialists: the scientists in the government service, members of the faculties of near-by institutions of learning,—of your own faculties. With these and other resources of counsel the Library is now, with its more ample funds, in a way to develop systematically. It

is progressing toward its goal. And this goal is: an organic collection covering every department of literature save such as are of necessity more appropriately covered by other governmental libraries within the district.

The Library of Congress was established primarily for the use of Congress; but in its content it was never merely a legislative library. With its present resources it is becoming a library not merely national, but *general*. It is seeking to acquire every book not already in possession of the Government, which is in content a contribution to knowledge. Countless books there are which it can never acquire: which are nevertheless the relish of the collector and give distinction to great libraries abroad. But these are books, or editions, whose interest is in their form or rarity, not in their content. Manuscripts also it will lack which are literary memorials and sources of history. But in so far as these bear upon American History it is likely to secure the substance of them in copies, transcript or facsimile. For it will endeavor to secure for use at Washington the substance, and where possible the form also, of every document which at present requires of the investigator a trip to London or Paris or Rome or Madrid or Seville or Simancas or the City of Mexico. For the study of American history indeed this Library and this city must be the centres. The manuscript sources in the present possession of the government would alone require this. The first two grants by the Carnegie Institution for historical research recognize it: one is for a statement by experts, more precise and more thorough than has ever before been accomplished, as to the nature, value, location and availability of these sources; another is a grant for the maintenance at Washington of an expert and assist-

ants, who shall aid, advise in and direct research involving the use of them.

But I refer to American history chiefly by way of example; for I can think of few branches of research involving the use of books for which Washington will not in time offer exceptional facilities.

The Library of Congress still specially serves Congress; it has a special duty to serve the Executive departments and scientific bureaus of the government; but it has in addition an ample margin of service to render to inquirers at large. It is a free public library; it is such to a degree not indicated by its title. It is, to be sure, a library primarily for reference use. So is every national library in the world; so are most of the great research libraries even of this country. As a library of record it has a duty to preserve; as a library for research it may perhaps best aid serious use by ensuring that the bulk of its collections shall be found by an investigator within its walls.

But these considerations do not preclude the issue for home use of a book required for a serious purpose by an investigator who cannot use it within the building. Indeed, the only regulation of use that has been formulated expressing the intent of the administration is: "The broadest possible use consistent with the convenience of Congress, the freest possible use consistent with the safety of the collections."

Consider then what Washington is to offer—what Columbian University is to offer: not a library but a whole system of libraries,—special libraries in particular fields of knowledge; and a general library covering every remaining field of knowledge and, so far as possible, all existing pro-

curable literature. The system is, to be sure, not yet organic. The various constituent libraries have heretofore been developed independently and without due regard for the field and the service proper to each. But a coöperation is now entered upon which will mean: a proper differentiation of each; uniformity of methods; the centralization of cataloguing; coöperative bibliographies; the interchange of material; and mutual service. The result may be an organic system of libraries unparalleled elsewhere. Did rhetoric permit I might call it "the most unique" library system in the world. But rhetoric doesn't permit;—also, that title has been appropriated by another "library system" with which we need not enter into competition.

This library system of the government is a laboratory for the university; and it is a laboratory maintained without a dollar of expense to the University—a prime consideration; for the University is poor. Of course it is poor: a university cannot reputably be otherwise than poor. I think, however, of another university of whose problems I have some knowledge,—of Harvard,—also poor—with a great library, to be sure, the greatest academic library in this country, but in deep perplexity for a building in which to accommodate it and for funds with which to increase and to administer it. A meagre \$70,000 a year is all that it can spare for increase and administration. And I cannot but contrast the fortune of Columbian, with even greater collections at its disposal, maintained and increased at a cost of a million dollars a year, but for which it does not have to divert a dollar from its precious funds for instruction.

In 1814 George Ticknor in Boston had to send to New Hampshire for a German dictionary and to ask Edward

Everett for the loan of a German grammar. A Euripides in the original could not be bought at any shop in New England. When he went to Göttingen he was astonished at the profuse expenditure there for books and in contrast the personal poverty of the professors. When a professor appeared in a new waistcoat the class burst into applause.—“How,” he asked, “did they behave when he appeared in a new coat?”—“A new coat!—a professor in a new coat!—Gott bewahre!—Such a thing never happened!!”

Well, conditions have improved since Ticknor's day. There is now a fair abundance of books at most seats of learning. At Columbian, at least, they are likely to be had without depriving your faculty of the luxury of an *occasional* new coat, and of leading the fashion in waistcoats.

I have been led to speak of these conditions to you this evening because I could speak of them as a librarian, and though not as librarian of the university, yet in a sense as one of the librarians *to* the university. The facts may be familiar to you, but the estimate of their significance from the technical and comparative standpoint of us who are dealing with them professionally may be less familiar. Perhaps you have been utilizing these resources to the full; at all events you will desire them to be utilized by your successors; and certainly you will desire them to count their fullest in the reputation of the university and its power of attraction.

I have kept my promise to abstain from the trite theme of the uses of books. You know more of these than I can tell you,—or than you yourselves will ever know again. This

occasion is for you the apex,—the summit of the hill of knowledge,—unsullied by experience. It is not merely a parting of the ways,—it is a parting of the wise. You will never be so wise again. You will know more; but you will never again be so wise. You will never again have the interest in books that you have had in the past few years, nor the confidence in their solution of the problems of life that you have today. The book which is now to concern you is the book of life. The book of life isn't easy reading. And it has no index. Rather, I should say, it has an index, and the index is where indexes should be—at the end. But it is shut to you till you reach the end. Indeed it is a book which each of you must not merely read but must write for himself. Write it fairly, write it sturdily, and it will be a book to last, even though it never find a publisher. It will at least form a section of that awful ledger, kept by the unerring accountant, which is to yield up its debits and credits against you at the final commencement day.

Cotton Mather used to oblige his children "to retire and ponder on that question 'What should I wish I had done if I were now dead.'" A salutary but somewhat sombre diversion,—to which I shall not now invite you, though I might find precedents. The world is a cheerful world today; and the most interesting world that ever was; and the book that your life is to write may if you like be a cheerful and interesting book, and a helpful one; for full of service as the world appears, help is still needed.

It is a fashion of commencement addresses to advise you how to write it. I am not the one to advise you, and I shall not try. I have undertaken rather to say something of the opportunities which you are leaving than of those which lie

before you. If I should say anything of these latter, it would be only to urge you to apply to them the ideals, the standards, and as many as possible of the methods for which the academic life stands. *Freedom* is one: the academic freedom, which follows an argument to its consequences, however inconvenient; freedom to form an opinion, and to hold, and to utter it, even though it differ from your neighbor's; *tolerance* for his opinion though it differ from yours; *respect* for the accumulated judgment of the past as against the whim or emotion of the present. But I need not recapitulate them. They are familiar as the qualities most precious of the academic life. Do not, I beg of you, assume that they must be abandoned in the practical life.

The most of you have pursued a course in science; and you have had an opportunity afforded in no institution outside of Washington, of a near view of a great body of scientific workers, working at small compensation for great utilities, unmercenary, devoted, absorbed in the pursuit of truth for truth's own sake, furthest removed from commercialism. That is a privilege which your Catalogue does well to rank high. Those of you who have pursued the liberal arts have had in addition a larger participation in that literature which brings to you the example of other men of other times. If this literature can mean something to you hereafter, I would not, in spite of my pledge, urge you to lay it aside. I would not advise you wholly to abstain from the use of books even in your practical affairs;—I would not recommend this even to those of you who are to become librarians!

Lord Palmerston used to boast that he "never read printed books." Well, Lord Palmerston was a considerable man of

affairs. He sat in sixteen parliaments and held office for nearly half a century as Secretary of War, Secretary of State for Foreign Affairs, Premier and First Lord of the Treasury. He "raised the prestige of England throughout Europe to a height which it had not occupied since Waterloo; created Belgium, saved Portugal and Spain from absolutism, rescued Turkey from Russia and the highway of India from France." Signal achievements. And yet they might have been more admirable by a more admirable man. Lord Palmerston's boast was, to be sure, an affectation. He was a college bred man, and his last act, at eighty years of age, gouty and decrepit, was to ride to Harrow to lay the foundation of the school library. He *did* read books. But he preferred to be known not as a reader of books but as a reader of people. He read these not ill, but basely. He studied human nature from its selfish side; he judged men by their worst notions and utilized their worst impulses. He studied and used the art of making the worse appear the better reason. He was "content to have the same predilections as the majority; to have the same likes and dislikes as his country:" a form of patriotism doubtless, but not the highest patriotism in a leader who from his very eminence is able best to see the higher justice, and has power to make it plain to others. Contrast the great leader who was preëminently the man of books. The "unapproached supremacy" of Gladstone lay in his insistence on the ethical; his assertion of the higher morality as against selfishness and present expediency. He was an idealist; and it was his idealism—the result of a profoundly religious nature fostered by incessant contact with books—it was his idealism that was his motive of action and his power. Can any one doubt which character has left the nobler impress?—It may be a complacent

thing to have changed the boundary of an empire: it is a *finer* thing to have kept fixed before a great people the boundary between right and wrong.

Large examples, I know, and large affairs. But in the moral world, as in the æsthetic, it is not the size of the affair that counts, but the quality you apply to it.

If you have gained ideals from books, or otherwise from your academic life do not be ashamed of them and do not hesitate to apply them. They may not be so musty after all, nor prove so inapplicable to the present uses of society. The ancients cannot tell us much of service to the industrial arts of today or to modern commerce. In technology the entire body of classical literature isn't a circumstance to that 25 K. W. dynamo which you installed in your machine shop last year. But when it comes to the moral, the social and the political questions, and the matters of taste and feeling, even the ancients still have something for us. As to these "no greater men are now than ever were." So Emerson thought and said, and Emerson touched no mean height himself.

For rules of conduct at least we need not await tomorrow's newspaper. Mr. Lowell once defined the aim of a university as he thought it: to "make a gentleman of every youth put under our charge;—not a conventional gentleman but a man of culture, a man of intellectual resource, a man of public spirit, a man of refinement, with that good taste which is the conscience of the mind, and that conscience which is the good taste of the soul." An admirable epitome, and well suited to our era: but here is a description of a gentleman who lived eighteen centuries ago written by a gentleman who died over seven-teens centuries ago. Consider if any essential be lacking.

"Gentleness, yet unwavering adherence to judgments formed after due deliberation; indifference to honors commonly so-called; industry and assiduity; readiness to listen to any scheme for promoting the public good; an inflexible determination to render every man his due; tact to choose the proper time for severity and leniency * * * a sense of fellowship with mankind. * * * In every situation * * * contented, cheery, thoughtful of the future and careful about small matters, without fussiness. * * * Toward the gods not superstitious nor toward men demagogical, obsequious, or studious of popularity; an enemy of sophistry, vulgarity or pedantry,—in all things sober and steadfast."

Standards change; and the relative proportions of things. At Harvard in the 18th century they used to fine profanity at two shillings sixpence and lying at but one and six. Today we deprecate profanity, but we *abhor* a liar. Standards change; but the essential qualities of a gentleman as a pagan saw them seventeen centuries ago seem to tally fairly with the essentials as we see them today.

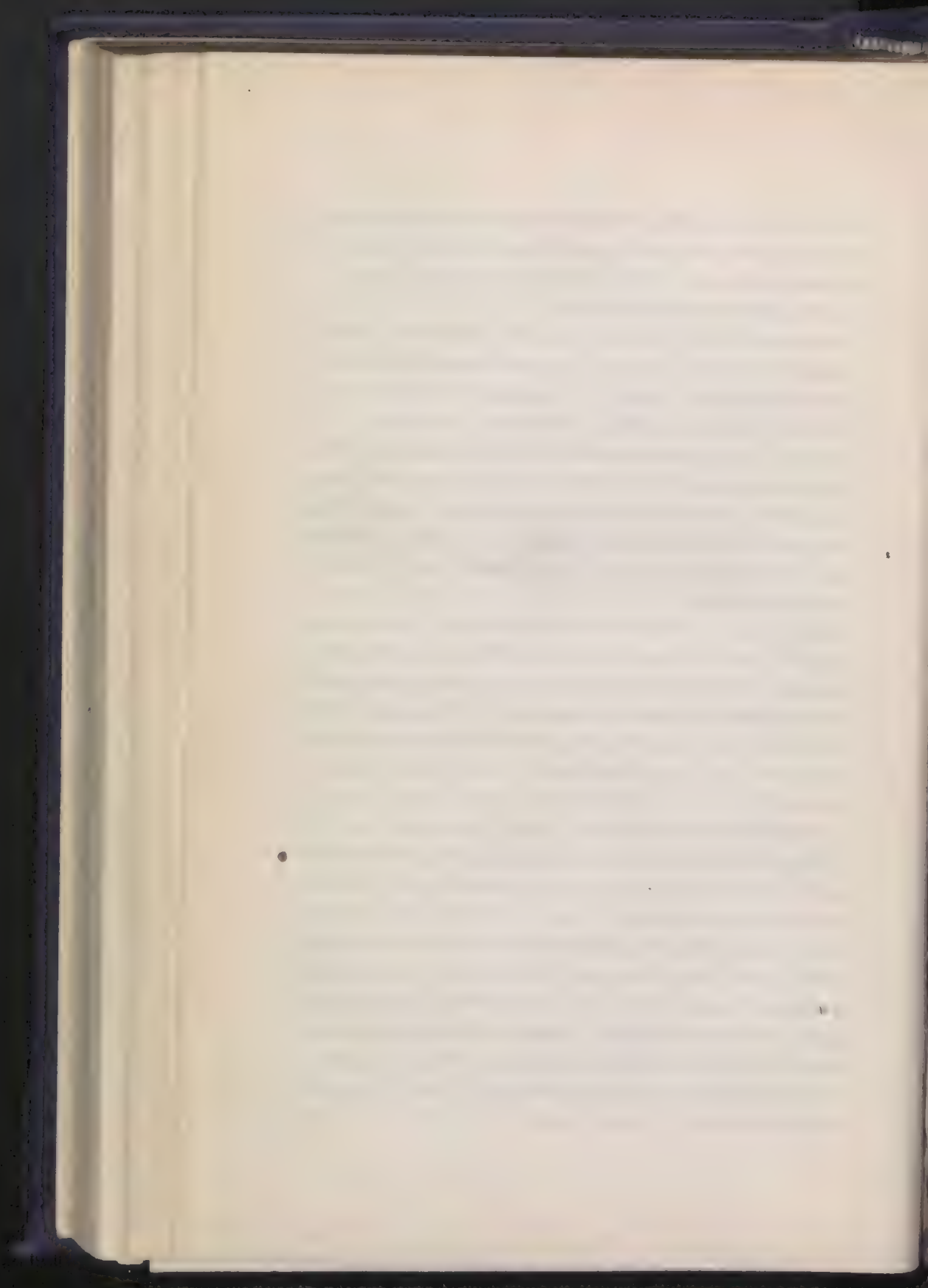
I think Lowell's aim for a university as a breeder of gentlemen—gentlemen of both sexes—worthy of consideration. But Mr. Lowell had it must be admitted an archaic notion of a university. He would have preferred to see it "a place where nothing useful is taught." You are going out into the world to be *useful*; you are to do practical things, not merely to think true and agreeable things, and I would not for a moment diminish your ardor for this doing, nor the glory of the practical thing done. But where moral or æsthetic standards apply, where a principle is involved, where an ideal offers, do not hesitate to assert it. You may be ridiculed: but ridicule isn't fatal. You may even be charged

with a rediscovery of the Ten Commandments; but you can stand that. You will be in good company. Also, the world is drawing round to the Ten Commandments, though it doesn't always like to be told so.

The fact is, at the bottom of its heart the world loves an idealist: at first as it loves a lover,—half-quizzically, as something fragile, visionary, to be protected from itself and himself;—but then perhaps with a love that follows and adopts. At the idealist it looks first with amusement, then with suspicion, then with doubt, but finally, it may be, with conviction. Throughout, however, it looks to see whether he believes in himself. If he does, if he shows true, it finally begins to think that after all he may have found something that concerns it.

An idealist who fails is at worst but rueful. He has not succeeded; but he has stood for something that deserved to succeed,—that may succeed later on. But is anything more pitiable than the man who has made a compromise and then finds that it wasn't necessary?—Is there any one more sheepish? He has retarded society; and he has writ himself a coward.

I wish you good speed,—but I wish you even more a sure footing: and in the *long* run (it is the long run you are now entering upon)—in the long run the sure footing is principle rather than expediency. Above all, I say, whatever the affair, big or little, if you have ideals do not be ashamed of them; and if, as time goes on you find, as you certainly will find, that by standing up to and for them you have not merely bettered something outside of yourself, but have made your own life simpler, clearer, heartier, cast a grateful thought backward to the University which, with men—and books—has helped to create them.



FIFTH ANNUAL REPORT

OF THE

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OF THE

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OF

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1333 TO 1335 H STREET NORTHWEST

OCTOBER 31, 1902, TO NOVEMBER 1, 1903

WASHINGTON, D. C.

JUDD & DETWEILER, PRINTERS

1904



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Miss McCauley.	Mrs. D. K. Shute.
Mrs. O. A. M. McKimmie.	Mrs. J. G. Slater.
Mrs. W. H. McKnew.	Mrs. G. O. Smith.
Mrs. Louis Mackall.	Mrs. James Spalding.
Mrs. C. E. Munroe.	Mrs. W. McK. Stowell.
Mrs. Charles W. Needham.	Mrs. J. Y. Taylor.
Mrs. C. A. Oswell.	Mrs. H. C. Thompson.
Miss Dean Owen.	Mrs. F. W. True.
Mrs. L. E. Payson.	Mrs. J. Ford Thompson.
Mrs. H. B. Polkinhorn.	Mrs. J. Van Rensselaer.
Miss H. E. Polkinhorn.	Mrs. Elizabeth Walbridge.
Mrs. Robert Portner.	Mrs. W. S. Washburne.
Mrs. D. W. Prentiss.	Mrs. A. O. Winbigler.
Mrs. C. W. Richardson.	Mrs. S. G. B. Winslow.
Mrs. Mason Richardson.	Mrs. F. A. Woodward.
Mrs. J. E. Reyburn.	Mrs. M. B. Wright.
Mrs. L. J. Rutherford.	Miss G. D. Wright.
Mrs. Herman Schreiner.	Mrs. H. C. Yarrow.
Mrs. Hermann Schoenfeld.	Mrs. C. E. Young.
Mrs. A. R. Shands.	

REPORT OF THE PRESIDENT OF THE BOARD OF GOVERNORS.

To the Board of Governors of the Columbian University Hospital.

GENTLEMEN: As stated in the last annual report (November, 1902), the Hospital was closed to the admission of patients on July 19 of that year, owing to changes and additions then going on in the Hospital building. From unavoidable delay with the interior finishing, furnishing, and equipment of the new buildings, the institution was not again open for the reception of patients until February 28, 1903.

On that day it was formally reopened with appropriate dedicatory ceremonies, participated in by President Needham, Rev. S. H. Greene, D. D.; Rev. Teunis S. Hamlin, D. D.; Commissioner Macfarland, Dr. A. F. A. King, and others, followed by a reception and collation during the afternoon, when the new buildings were inspected by several thousand visitors and friends.

Patients were admitted on the succeeding day (March 1), and the total number of admissions from that date until the close of the Hospital year, November 30, 1903, comprising a period of eight months, as shown by the report of the Superintendent, was as follows: Medical cases, 189; surgical cases, 216; gynecological cases, 54; obstetrical cases, 31—total, 490.

The surgical operations numbered 128.

The admissions to the dispensary service comprised several hundred cases, of which, however, the record is too imperfect for exact statement. This should be remedied in future by a more systematic method of registration.

Finances.—The report of the Treasurer shows the total receipts for the fiscal year ending August 31, 1903, to have been \$21,793.36 and the total expenditures \$22,865.85; deficit, \$1,072.49.

It should be noted that the receipts from pay-patients during the year include only the money received from March 1, 1903, when the Hospital was reopened, until August 31, 1903, a period of six months. Furthermore, the large outlay of \$9,920.96 for equipment of the new building was an extraordinary expense that will not occur again, and likewise the amount of \$1,277.19 for medical and surgical supplies was probably more during this first year than it will ever be in future. With judicious and economic management, there is no reason why the Hospital should not be self-supporting or even afford a credit balance to reduce the outlay expended in its erection.

Of the total receipts for the year the sum of \$3,450 was contributed by the Board of Lady Managers, \$1,600 of this amount having been given by

Dr. R. B. Donaldson, Mrs. Stanley Matthews, Mrs. Heman D. Walbridge, Mrs. Southwick C. Briggs, Dr. and Mrs. H. C. Yarrow, Mrs. William E. Clark, Miss Mary Van Vranken, and Mrs. D. C. Phillips as special donations to furnish memorial rooms, details of which appear in the Treasurer's report of the Board of Lady Managers.

The receipts also include a sum of \$4,690 contributed by the friends of the late Dr. W. W. Johnston to dedicate the two medical wards of the Hospital as a memorial to him.

A contribution was made by Mrs. William H. McKnew for the furnishing of a suite of rooms in memory of her husband, the late William H. McKnew.

A contribution was likewise made by Mrs. Gardiner G. Hubbard for the furnishing of a suite of rooms in memory of her husband, the late Gardiner G. Hubbard.

The sum of \$1,000 was contributed by the Department of Medicine, this being its fifth annual contribution of a similar amount. The report of the Superintendent, Dr. H. C. Macatee, and of Miss Minnie Paxton, the Superintendent of Nurses (to both of whom we are indebted for faithful and diligent service), present details as to clinical instruction utilized by medical students, and the training and education of the nurses, which I need not here repeat, further than to say that the establishment of the Nurses' Home will leave additional rooms for pay-patients in the Hospital, by which it is hoped the annual revenue will be increased.

The dispensary service has not yet been as large as was desired, but it is hoped there will be improvement in this respect when the medical charity it designs to render shall have become more widely known among the suffering poor. To the physicians on the Dispensary Staff, whose patient attendance has contributed to the establishment of this service, our thanks are justly due. To the Board of Lady Managers, whose continued devotion and loyalty to the welfare of the Hospital have contributed so largely to promote its interests, we tender our most sincere thanks. We beg also to acknowledge most gratefully the generous donations of the kind friends, previously mentioned, by whose liberality the memorial rooms were furnished. The work of the Assistant Resident Physicians, Drs. George M. Ruffin, Joseph D. Rogers, Francis H. Poole, Samuel Fry, Harry H. Donnally, Henry C. Coburn, and Carl V. Nyman (pharmacist), and of the externs, Messrs. James G. Fisher, Charles W. Hyde, Montafix W. Houghton, Llewellyn Powell, and Raymond A. Fisher, has been eminently satisfactory and commendable.

Respectfully submitted.

A. F. A. KING, M. D.,
President.

REPORT OF THE SUPERINTENDENT OF THE HOSPITAL.

COLUMBIAN UNIVERSITY HOSPITAL, December 16, 1903.

To the Board of Governors of the Columbian University Hospital.

GENTLEMEN: In submitting herewith a tabulated report of the medical work done in the Hospital during the period beginning with the opening of the new building, on February 28, and terminating with the Hospital year, on October 31, 1903, attention may be called to the large number of patients treated and the great variety of morbid conditions coming under the notice of the house staff. In many cases these patients were presented before the medical classes in the course of clinical instruction, for which purpose the Hospital was instituted.

It may be noted here that the total number of 490 cases treated in the eight months included in this report means a monthly average of about 62 new patients, or 2 per day, thus preserving a healthy circulation in the work and increasing the clinical opportunities.

Of the total number of patients admitted, 294 occupied private rooms; the remaining 196 were treated in the wards. This excess of private patients over ward patients is to be regretted from an educational point of view, but the condition seems to be correcting itself as the facilities of the Hospital for treating the indigent sick become better recognized.

No report of the work done in the out-patient dispensary service can be submitted, as this department has thus far been in the formative stage. A more accurate method of keeping the records of cases treated in the dispensary has been adopted, the attending physicians are more regular in their coming, and the service appears to be growing.

The Hospital is very fortunate in being enabled by the University authorities to give more commodious and comfortable quarters to the nurses in the building prepared for their use at No. 1328 I street. The Hospital building, thus relieved of the former tax on its room capacity, will accommodate about 15 additional patients.

The successful conduct of the Hospital thus far has been made possible by the fidelity and intelligence of the members of the house staff and, to a degree inestimable in value, by the readiness and cheerfulness with which the pupil nurses have borne the first shock of the difficulties. To the Superintendent of Nurses, Miss Paxton, belongs all the credit for the unceasing diligence which has created a working training school from entirely new material, and has placed in our wards in so short a time young women already adequately trained to meet and satisfy the demands of the sick, upon whose comfort and careful management so much of a hospital's success and reputation depend.

For the help, encouragement, and considerate courtesy of the Officers and Boards of the University and Hospital, I beg to express deep appreciation.

Respectfully,

H. C. MACATEE, M. D.,
Superintendent.

REPORT OF THE SUPERINTENDENT OF NURSES.

COLUMBIAN UNIVERSITY HOSPITAL,

December 17, 1903.

The Board of Governors of the Columbian University Hospital.

GENTLEMEN: The Training School for nurses in connection with the Columbian University Hospital was opened on February 28, 1903. The course of instruction will cover a period of three years, and includes general medical, surgical, gynecological, and obstetrical nursing. Arrangements have been made with the Training School of the Children's Hospital to exchange nurses for a period of four months each, thus giving the pupil nurses of this school experience in the nursing of children.

The theoretical instruction comprises a weekly lecture by the professors in the Medical Department of the University, lectures on Anatomy by the Superintendent of the Hospital, and recitations on *Materia Medica* under the direction of the Pharmacist. Practical nursing is demonstrated at the bedside and taught in the class-room by the Superintendent of Nurses.

A diet-kitchen is soon to be established, through the generosity of the Board of Lady Managers, where the nurses will learn the art of cookery for the sick.

The large number of private patients in the Hospital gives the pupils experience which will be of great benefit to them in their post-graduate work.

The Nurses' Home, at 1328 I street, has been repaired and put in condition for occupation early in the coming hospital year. In this connection the necessity of a new gate in the wall surrounding the Hospital grounds may be urged, in order to shorten the distance between the Hospital and the Home, and to minimize to the greatest extent possible the necessity of traversing a public alley in passing between the two buildings.

The number of applications for admission to the Training School has been large, and only those who show special aptitude for the work after two months' of probation can be accepted.

There are now in the School:

- 1 Superintendent of Nurses.
- 1 Assistant Superintendent of Nurses.
- 1 Night Superintendent.
- 19 Pupil Nurses.
- 2 Probationers.

Very respectfully,

MINNIE PAXTON,
Superintendent of Nurses.

REPORT OF THE TREASURER.

From September 1, 1902, to August 31, 1903.

RECEIPTS.

From pay patients	\$11,454 86
Fifth annual contribution, Medical Department	1,000 00
Dr. Sterling Ruffin, special contribution.	90 00
Contributions for equipment :	
Board of Lady Managers.....	\$3,450 00
W. W. Johnston memorial.....	4,690 00
Sundry contributions.....	1,108 50
	9,248 50
	\$21,793 36
Deficit for the period.....	1,072 49
	\$22,865 85

DISBURSEMENTS.

For salaries.....	\$3,493 51
For table supplies.....	5,194 92
For household expenses.....	2,979 27
For medical and surgical supplies.....	1,277 19
For equipment.....	9,920 96
	\$22,865 85

CASH STATEMENT.

Receipts, September 1, 1902, to August 31, 1903.....	\$21,793 36
Disbursements, same period ...	22,865 85
Deficit.....	\$1,072 49
Paid by Medical Department	\$974 85
Paid by University.....	97 64
	\$1,072 49

REPORT OF THE TREASURER OF THE BOARD OF LADY MANAGERS.

From November 1, 1902, to October 31, 1903.

Cash on hand November 1, 1902..... \$428 50

RECEIPTS.

Annual dues :

Mrs. Cleveland Abbe.....	\$5 00
Mrs. Frank Altemus.....	5 00
Mrs. H. R. Bigelow.....	5 00
Mrs. J. Wesley Bovée.....	5 00
Mrs. Irene Buchanan.....	5 00
Mrs. Eugene Byrnes.....	5 00
Mrs. W. P. Carr.....	10 00
Mrs. Mitchell Carroll.....	5 00
Mrs. G. W. Cook.....	5 00
Mrs. G. S. Cooper.....	5 00
Mrs. Wm. E. Clark.....	5 00
Mrs. Robert Craig.....	5 00
Mrs. J. H. Cranford.....	5 00
Mrs. E. P. Dickinson.....	5 00
Mrs. W. L. Davidson.....	5 00
Mrs. Clarence Dufour.....	5 00
Mrs. Chas. Gould.....	5 00
Mrs. James M. Green.....	5 00
Mrs. S. H. Greene.....	10 00
Mrs. Francis R. Hagner.....	5 00
Miss Anna S. Hazleton.....	5 00
Mrs. H. L. Hodgkins.....	5 00
Mrs. Hoffman.....	5 00
Miss Jessie Hopkins.....	5 00
Mrs. Hornblower.....	5 00
Mrs. A. F. A. King.....	5 00
Mrs. C. H. Lane.....	5 00
Mrs. Frank Leech.....	5 00
Mrs. J. Hall Lewis.....	5 00
Mrs. S. E. Lewis.....	5 00
Mrs. W. H. McKnew.....	5 00
Mrs. O. A. M. McKimmie.....	5 00
Miss. McCauley.....	5 00
Mrs. McAdams.....	5 00

Mrs. Louis Mackall, Jr.....	\$5 00
Mrs. Chas. E. Munroe.....	5 00
Mrs. F. P. Morgan.....	5 00
Mrs. C. W. Needham.....	5 00
Miss O'Connell.....	5 00
Mrs. C. A. Oswell.....	5 00
Miss K. D. Owens.....	5 00
Mrs. L. E. Payson.....	5 00
Mrs. Robert Portner.....	5 00
Mrs. D. W. Prentiss.....	5 00
Mrs. C. W. Richardson.....	5 00
Mrs. Mason N. Richardson.....	5 00
Mrs. H. Schoenfeldt.....	5 00
Mrs. T. F. Schneider.....	5 00
Mrs. H. Schreiner.....	5 00
Mrs. James Sharp.....	5 00
Mrs. D. K. Shute.....	5 00
Mrs. J. G. Slater.....	5 00
Mrs. G. O. Smith.....	5 00
Mrs. James H. Spalding.....	5 00
Mrs. W. McK. Stowell.....	5 00
Mrs. J. Y. Taylor.....	5 00
Mrs. J. Ford Thompson.....	10 00
Mrs. O. V. Tousley.....	5 00
Mrs. J. Van Rensselaer.....	5 00
Mrs. W. A. Wilbur.....	5 00
Mrs. A. O. Winbigler.....	5 00
Mrs. Winslow.....	5 00
Mrs. Frank Wolff.....	5 00
Mrs. Grace Woodward.....	5 00
Mrs. H. C. Yarrow.....	10 00
Miss Grace D. Wright.....	5 00
Mrs. M. D. Wright.....	5 00

 \$355 00

Fines..... 57 30

Sustaining members:

Mrs. Charles Edmonston.....	\$5 00
Mr. John H. Small.....	5 00
Mr. T. Ogram.....	5 00
Mrs. Z. T. Sowers.....	5 00
Miss Marion Everett.....	5 00
Mrs. M. J. Cranford.....	5 00
Mr. Wm. A. Henderson.....	5 00
Mr. N. W. Burchell.....	5 00
Mr. F. C. Henry.....	5 00

Mr. Jas. B. Lambie	\$5 00
Mr. Chas. A. James	5 00
Mr. Chas. A. Shafer	5 00
Dr. A. F. A. King	5 00
Dr. H. C. Yarrow	5 00
Mrs. J. C. Nourse	5 00
Mr. John R. Major	5 00
Miss Annie Wayland (deceased)	5 00
Dr. Sterling Ruffin	10 00
Dr. Garnett L. Hills	5 00
Dr. E. A. de Schweinitz	5 00
Mrs. C. C. Glover	5 00
Mr. A. B. Browne	5 00
Mrs. J. Ormond Wilson	5 00
Mrs. Caroline M. McCorkle	10 00
Mr. James F. Oyster	5 00
Dr. W. F. R. Phillips	5 00
Mr. I. C. Slater	5 00
Col. W. B. Thompson	5 00
Mr. H. W. Taylor	5 00
Mr. T. J. Talty	5 00
Mrs. Cleveland Abbe	5 00

\$165 00

Donations:

Mrs. A. F. A. King	\$100 00
Through Mrs. Rutherford	5 00
Mrs. D. R. McKee	25 00
Board of Lady Managers for seamstress to make sash curtains	5 65
Through Mrs. G. W. Cook	5 00
For Gould Class-room through Miss Hopkins ..	4 00
Mrs. Gould for Gould Class-room	5 00
Mr. H. W. Taylor for Gould Class-room	5 00
Rebecca Lodge, D. O. I	10 00
Through Mrs. Hodgkins for First Baptist Church Room	5 00
Board of Lady Managers for Board of Lady Man- agers' Room	100 00
Through Mrs. Charles E. Munroe, for sun parlor	7 00
Mrs. Jas. Sharp, for sun parlor	1 00
Mrs. A. R. Shands, for sun parlor	2 00
Mrs. C. V. R. Berry, for sun parlor	25 00
Mrs. L. E. Payson, for sun parlor	10 00
Mrs. J. G. Slater, for sun parlor	5 00
Mrs. C. J. Bell, for sun parlor	50 00

369 65

Memorial Rooms:

Dr. R. B. Donaldson	\$250 00
Mrs. Stanley Matthews.	200 00
Mrs. Heman D. Walbridge and Mrs. Southwick C. Briggs	200 00
Dr. and Mrs. H. C. Yarrow.....	200 00
Mrs. Wm. E. Clark	250 00
Miss Mary Van Vranken.....	250 00
Mrs. D. C. Phillips.....	250 00
	<hr/>
	\$1,600 00
Proceeds of Bazaar held April 14, 1903, at the Washington Club.	574 52
Interest on money in bank.....	5 47
Total.....	<hr/>
	\$3,555 14

SUMMARY OF RECEIPTS.

Cash on hand November 1, 1902.....	\$428 50
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RECEIPTS.

Annual dues.....	\$355 00
Fines.....	57 00
Sustaining membership fees.....	165 00
Donations	369 65
Furnishing Memorial Rooms.....	1,600 00
Proceeds of Bazaar.....	574 52
Interest	5 47
	<hr/>
	3,126 64

Total.....	<hr/>
	\$3,555 14

Paid Columbian University March 16, 1903.....	\$1,900 00
Paid Columbian University May 11, 1903.....	1,200 00
Paid Columbian University June 15, 1903.....	350 00
Cash on hand October 31, 1903.....	105 14
	<hr/>
	\$3,555 14

Respectfully submitted.

AUGUSTA SHUTE, *Treasurer.*

The undersigned report the foregoing account found correct and properly vouched for, and that the Treasurer has funds in her possession amounting to one hundred and five dollars and fourteen cents (\$105.14).

ELIZABETH WALBRIDGE,
GEORGE O. CARR,
Auditing Committee.

DONATIONS TO THE UNIVERSITY HOSPITAL.

From February 1, 1903, to October 31, 1903.

February.

Col. Bingham, flowers.
H. K. Mulford & Co., drugs and predigested beef.

March.

A. C. Fitch, 1 box of toilet soap.
Mrs. I. A. Ellis, 1 bookcase for sun parlor.
National Plant, Fruit, and Flower Guild, potted plants.
Mrs. Cullinan (through Dr. Dowling), old linen.
Mrs. Heitenger (through Dr. Dowling), old linen.
Mrs. C. M. McCorkle, invalid chair.
Dr. H. C. Yarrow, books and periodicals.
Dr. S. J. Radcliffe (through Dr. Thompson), surgical instruments.
Dr. I. B. Dixon, 1 barrel of flour.
Washington Bible Society, Bibles and Testaments.
Mrs. Van Rensselaer Berry, table linen and towels.
Mrs. H. D. Walbridge, linen.
Mrs. Wm. Wheatley, wine.
Miss Andrews, table linen.
Lea Brothers & Co., Philadelphia, Pa., Dimon's Clinical Diagnosis,
Dimon's Physiological Chemistry, Dimon's Manual of Chemistry.
Mrs. Richard Clayton, furniture for sun parlor.
Miss Jessie Howe, magazines.
Dr. J. W. Bovée, surgical instruments.
Dulin & Martin, 1 Eddy refrigerator.

April.

Mrs. Spooner, books and magazines.
Mrs. Silsby, books and magazines.
National Plant, Flower, and Fruit Guild, flowers for Mrs. Yarrow's room.
Dr. H. C. Yarrow, books and magazines.
Miss Jessie Howe, magazines.
Mrs. Wm. Murray Black, cradle for nursery.
Mrs. Polkinhorn, \$1 cash for Easter dinner.
Agricultural Department (Mrs. U. S. B. Hubbard), flower seed.
Agricultural Department, Dr. Wylie (Mrs. Carroll), palms and potted plants.

Mrs. W. H. Hoeke, 1 lady's desk, cut flowers.
 Miss Hopkins, tomatoes.
 Mrs. H. D. Walbridge, ice cream.
 Dr. H. C. Yarrow, bananas, apples, grapes.
 Mrs. Wm. P. Carr, oranges.
 Mrs. W. H. Hoeke, lettuce and tomatoes.
 Miss Andrews, eggs, flour, jelly, and cake.
 Mrs. Needham, oranges.
 Mrs. W. J. Hoffman, oranges.
 Lend a Hand Club (Mrs. Dutton), lettuce.
 Miss Mayo, periodicals.
 Miss E. Braesway, New York (Dr. Dowling), old linen.
 Friday Morning Sewing Class (Mrs. Hornblower), sheets and towels.
 New York Avenue Sunday School, ice cream and cake.
 Mrs. Walbridge, periodicals.
 Mrs. I. A. Ellis, books.
 Dr. A. F. A. King, surgical instruments.
 Mrs. Richard Clayton, books and periodicals.
 Miss Emma L. Buckopen, bandages.
 Miss Clayton, books of Robert Louis Stevenson.
 Mrs. H. D. Walbridge, tabourette.

May.

Mrs. S. E. Lewis, making hospital supplies.
 Mrs. Hills, crutches and Sunday papers.
 Miss Owens, baby socks.
 Mrs. Everett, magazines.
 No name, magazines.
 Mrs. Thompson, old linen.
 Miss McFarlane, magazines.
 The Needlework Guild (Miss Owens), baby clothes.
 Mr. W. H. Hoeke, two tabourettes.
 Mrs. Elizabeth Walbridge, Sunday papers.
 Miss Polkinhorn, magazines and jelly.
 Miss Owen, slippers and jelly.
 Miss Annie S. Brooks, picture.
 Miss Clayton, periodicals.
 Mrs. Wm. E. Clark, periodicals.
 Mrs. Thos. Hill, papers.
 Mrs. Garrett Hill, magazines.
 National Plant, Flower, and Fruit Guild, flowers.
 Miss Dean Owen, McClure's magazine for year.
 No name, magazines.
 Dr. D. W. Prentiss, surgical bandages.

Dr. H. C. Yarrow, books.
 Mrs. Wm. E. Clark, book.
 Miss M. C. Wood, magazines.
 Miss Clayton, magazines.
 Mrs. Spooner, magazines.
 Mrs. R. Y. Cadmus, baby clothes and magazines.
 New York Avenue Presbyterian Church, cakes.
 Mrs. Hill, Sunday papers.
 Miss Andrews, flowers.
 Mr. J. Eakin Gadsby, mint and parsley.
 Mrs. Elizabeth Walbridge, 5 dozen eggs.
 Mrs. Chester, flowers.
 Mr. J. E. Gadsby, parsley.
 Mrs. W. E. Clark, magazines.
 Needework Guild, 11 pillow cases, 4 tea towels, 4 bath towels.
 Mrs. Everett, making hospital supplies.
 Mrs. W. P. Carr, vegetables.
 Dr. Bovée, surgical instruments.
 Mrs. Eastman, Falls Church, Va., flowers.
 Mr. Sinclair B. Sheibley, magazines.

June.

Mrs. W. H. Hoeke, water-cooler and stand.
 Mrs. W. E. Clark, water-cooler and stand.
 Mrs. Wallace McK. Stowell, ice cream for wards.
 Mrs. Eastman, Falls Church, Va., flowers and jelly.
 Dr. H. C. Yarrow, books and magazines.
 Mrs. Charles G. Gould, water-cooler.
 Mrs. H. B. Polkinhorn, magazines.
 Mrs. Hill, magazines.
 Mrs. A. F. A. King, screen for sun parlor.
 Mrs. W. H. Hoeke, magazines.
 Dr. Chas. W. Richardson, vegetables.
 Mrs. W. H. Hoeke, preserves.
 National Plant, Flower, and Fruit Guild, flowers.

July.

Mrs. W. H. Hoeke, ice cream.
 Propagating Gardens, flowers.
 Mrs. H. C. Thompson, games and books.
 National Plant, Flower, and Fruit Guild, flowers.
 Dr. Geo. N. Acker, picture for office.
 Mrs. F. W. True water-cooler.

August.

Dr. J. R. Tubman, basket of canteloupes.
 Propagating Gardens, cut flowers.
 Mrs. Eastman, Falls Church, Va., flowers.
 Mr. J. B. Macias, magazines.
 Mrs. M. F. Thompson, cakes.
 Miss M. C. Wood, magazines.
 Dr. J. R. Tubman, melons.
 American Rose Co., cut flowers.
 Mrs. Steele, magazines.

September.

National Plant, Flower, and Fruit Guild, flowers.
 Propagating Gardens (Col. Symonds), flowers.
 Mrs. John Y. Taylor, 12 jars of preserves.
 Mrs. Elizabeth Walbridge, vegetables.
 Mrs. Clark, 6 glasses of jelly.

October.

Dr. H. C. Yarrow, magazines, books for library.
 Mrs. Eastman, Falls Church, Va., flowers.
 Mrs. Wilbur, old linen.
 Mrs. Everett, magazines.
 No name, baby clothes.
 Mrs. B. F. Fisher, magazines.
 National Plant, Flower, and Fruit Guild, flowers.
 Mrs. McKnew, ice cream.
 Dr. D. W. Prentiss, medical books for N. library.
 New York Avenue Church (Mrs. Richardson), flowers, grapes, sandwiches, cakes.
 Mrs. Dutton, preserves and jelly.
 Mrs. True, jelly.
 Mr. J. L. Emmet, Center market, fruit.
 Mrs. Foster, magazines.
 Mrs. Willard F. Thompson, rubber plants, palms, preserves.
 Mrs. Birdsell, pictures.
 Mrs. Geo. H. Brown, book, Stories of Woods and Fields.

During the summer ice cream was contributed each Sunday for the wards by members of the Board of Lady Managers as follows :

JUNE.—Mrs. Stowell, Mrs. Cooper, Mrs. Yarrow, Mrs. Walbridge.

JULY.—Mrs. Carr, Mrs. Thompson, Mrs. McKnew, Mrs. Polkinhorn.

AUGUST.—Mrs. McKimmie, Mrs. Hoffman.

SEPTEMBER.—Mrs. Wm. Clark, Mrs. Shute, Mrs. McKnew, Mrs. True.

Ice cream was also given by Mrs. W. H. Hoeke on Fourth of July.

Sustaining Members.

Any person may become a Sustaining Member by the annual payment of five dollars.

Life Members.

Any person may become a Life Member by the payment of one hundred dollars.

Endowment of Beds.

Any person may endow a bed in the public ward by the payment of five thousand dollars.

Endowment of Private Rooms.

Any person may endow a Private Room by the payment of twenty thousand dollars.

Form of Devise.**PERSONAL PROPERTY.**

I give and bequeath to COLUMBIAN UNIVERSITY HOSPITAL of Washington, District of Columbia, and their successors, the sum ofdollars.

REAL ESTATE.

I give, devise, and bequeath to COLUMBIAN UNIVERSITY HOSPITAL of Washington, District of Columbia, and their successors forever, for the purpose of said Hospital.....

In the District of Columbia a will of real estate must be attested and subscribed in the presence of the devisor by three credible witnesses. A will bequeathing personal property does not require to be witnessed.

THE UNIVERSITY HOSPITAL.—PRIVATE ROOM



REPORT OF DISEASES TREATED IN COLUMBIAN UNIVERSITY HOSPITAL

From March 1, 1903, to November 1, 1903.

MEDICAL DISEASES.	Cured.		Im- proved.		Unim- proved.		Died.		Not treated.	Remaining Nov. 1, 1903.	Total.
	M.	F.	M.	F.	M.	F.	M.	F.			
Alcoholism, acute.....	10	1			2				1		14
Anæmia, pernicious.....										1	1
Aneurism, thoracic.....			1								1
Angina pectoris.....			1								1
Apoplexy.....			2				4			1	7
Arthritis deformans.....				1							1
Atonic dyspepsia and chronic diarrhoea.....							1				1
Bronchitis, acute.....	2	2									4
Bronchitis, subacute.....		1									1
Bronchitis, chronic.....			1								1
Bronchial asthma.....			1								1
Cephalalgia.....		1									1
Cholecystitis.....			1								1
Chorea.....					1						1
Colitis, ulcerative.....							1			1	2
Delirium tremens.....	2	1	1								4
Dementia, alcoholic.....					1						1
Dementia, senile.....					1						1
Diabetes mellitus.....				1						2	3
Dysomania.....											1
Endocarditis.....	1			1	1						2
Gastric carcinoma.....							1				1
Gastric ulcer.....		1									1
Gastritis, acute.....		3									3
Gastro-duodenitis.....				1							1
Gastro-intestinal catarrh.....	1	3		1							5
Gastropotosis.....										1	1
Heart disease, organic.....			2	1							3
Heart disease, organic, with dilatation.....			1							2	3
Hodgkin's disease.....			1								1
Hysteria.....				3							4
Ileo-colitis.....		1			1						2
Influenza, epidemic.....	2	7		1							10
Influenza pneumonia.....		2									2
Insomnia, post-alcoholic.....	1										1
Intestinal indigestion, acute.....	1	1									2
Iritis, acute.....			1								1
Jaundice, obstructive.....			1							1	2
Locomotor ataxia.....					1						1
Lumbago.....	1										1
Malaria.....		1								1	2
Malingering.....	1										1
Mania, acute.....										1	1
Melancholia.....										1	1
Morphinism.....				1		1					2
Myelitis, transverse, with morphinism.....										1	1
Nephritis, chronic.....			3				1			1	5
Neurasthenia.....	3	4		12						4	23
Neuritis, alcoholic.....				1							1
Paratyphoid fever.....	1										1
Poisoning, opium.....	1										1
Poisoning, ammon. fort.....	1										1
Rheumatism, acute artic.....	1	1								1	3
Rheumatism, subacute artic.....	1										1
Sclerosis of brain, disseminated.....					1						1
Spleno-mycogenous leukæmia.....					1						1
Tonsillitis, acute follicular.....	2	1									3
Tuberculosis, pulmonary.....			1		2					2	5
Tuberculosis, pulmonary, with intestinal lesions.....					1						1
Typhoid fever.....	19	10					2	2		8	51
	51	41	17	24	8	6	9	3	1	29	189

488

SURGICAL DISEASES.	Cured.		Im- proved.		Unim- proved.		Died.		Not treated.	Remaining Nov. 1, 1903.	Total.
	M.	F.	M.	F.	M.	F.	M.	F.			
Abscess, antral.....		2									2
Abscess, antral and frontal.....											1
Abscess, ischio-rectal.....	1	1	1								3
Abscess, mastoid.....	1	1	1								3
Abscess, mastoid and meningitis.....							1				1
Abscess, psoas.....			1								1
Abscess, prostatic.....											1
Abscess, sphenoidal.....		1								1	1
Adenitis, cervical, tuberc.....		1									1
Adenitis, axillary, tuberc.....	4	1									5
Adenitis, inguinal.....		1									1
Adeno-fibroma of breast.....		1								1	2
Adenoids, pharyngeal vault.....		1									1
Adenoids and elongated prepuce.....	1										1
Appendicitis.....	10	9			1	1			1	3	28
Appendicitis, with salpingo-oöphoritis and intestinal obstruction.....							1				1
Appendicitis, with cystic ovary.....		1									1
Appendicitis, peritonitis.....		1					1		1		3
Appendicitis, uterine fibroids.....		1									1
Atrophy of eye.....	1										1
Calculus, renal.....		1									1
Caruncle and senility.....										1	1
Carcinoma, breast.....		4									4
Carcinoma, bladder, with bilateral surgical kidney.....										1	1
Carcinoma capitis coll.....							1				1
Carcinoma, glands of neck.....				1							1
Carcinoma, larynx.....					1						1
Carcinoma, oesophagus.....									1		1
Carcinoma, rectum, inop.....									1		1
Cataract.....	2									1	4
Cellulitis.....	1										1
Cerebral concussion.....	1										1
Cholelithiasis.....	1	3									4
Conjunctivitis, purulent.....	1										1
Cystitis.....											1
Deflected septum nasi.....	1										1
Detachment retina.....										1	1
Dislocation, astragalus.....					1						1
Dislocation, elbow.....										1	1
Dislocation, humerus in resected elbow.....	1										1
Empyema.....	1										1
Epidermoid carcinoma.....	1										1
Epididymitis.....	2										2
Epithelioma, breast.....									1		1
Epithelioma, cheek.....	1										1
Epithelioma, labium major.....		1				1					2
Epithelioma, lip.....	1										1
Epithelioma, scalp.....				1							1
False joint, clavicle.....	1										1
Fistula in ano.....	2	2									4
Fracture, Colles'.....				1							1
Fracture, condyle of humerus.....	1										1
Fracture, olecranon process.....		1	1								2
Fracture, skull, with cerebral hemorrhage.....							1				1
Glaucoma.....				1							1
Gonorrhœa, with seminal vesiculitis and prostatitis.....										1	1
Gonorrhœa, chronic.....	1										1
Hare lip.....											1
Hemorrhoids.....	7	3									10

Diseases Treated in Columbian University Hospital—Continued.

SURGICAL DISEASES.	Cured.		Im- proved.		Unim- proved.		Died.		Not treated.	Remaining Nov. 1, 1993.	Total.
	M.	F.	M.	F.	M.	F.	M.	F.			
Hernia, abdominal.....		1									1
Hernia, inguinal.....	7	4							1		12
Hernia, inguinal, strangulated.....	1										1
Hydrocele, bilateral.....	1										1
Hypertrophy, tonsil.....	1	1									2
Infected stump.....	1										1
Intestinal obstruction.....								1			1
Keloids, finger tips.....		1									1
Necrosis, tibia.....	2	1									3
Nephroptosis.....		1									1
Orchitis.....	2		1								3
Orchitis and epididymitis.....	1										1
Ophthalmia.....	1										1
Osteitis, tuberculous.....			1	1							2
Otitis media suppurativa.....		1									1
Pancreatitis, chronic and obstructive jaun- dice.....								1			1
Pes equinus.....	1		1								2
Pes planus.....			1								1
Peritonitis, tuberculous.....								1			1
Prostatic hypertrophy, senile.....	1				1		2				4
Prostatic hypertrophy, with periurethral abscess.....							1				1
Prostatic hypertrophy, with gastric carci- noma.....							1				1
Panophthalmitis.....	1										1
Phimosis.....	4										4
Perityphilitis, chronic.....							1				1
Rupia.....										1	1
Sarcoma multiple.....					1						1
Sebaceous cyst, infected.....	1										1
Sprain of knee.....	1										1
Sprains and minor wounds.....	1										1
Spondylitis, tuberculous.....			1								1
Strabismus.....	1		1								2
Stenosis, lachrymal duct.....	1										1
Stricture urethrae.....	1									1	2
Suppurating sinus, thigh.....			1								1
Suppurating sinus, jaw.....	1									1	2
Syphilis.....			1								1
Thyroid cyst.....		2									2
Trachoma.....		1									1
Traumatic arthritis, with central venous thrombosis.....							1				1
Tuberculosis cutis.....										1	1
Tumor of neck, benign.....		1									1
Ulcer, diabetic.....		1		1							2
Ulcer, rectal.....			1								1
Ulcer, varicose.....			1								1
Varicocele.....	14										14
Varicocele and carbuncle.....										1	1
Varicocele and hydrocele.....										1	1
Vicious union, metacarpal bones.....			1								1
Wounds, lacerated.....		1								1	2
Wounds, lacerated, of face.....		1									1
Wound, incised, of knee.....	1										1
Wound, stab.....	1	1									2
	95	53	16	5	4	2	11	4	6	20	216

Diseases Treated in Columbian University Hospital—Continued.

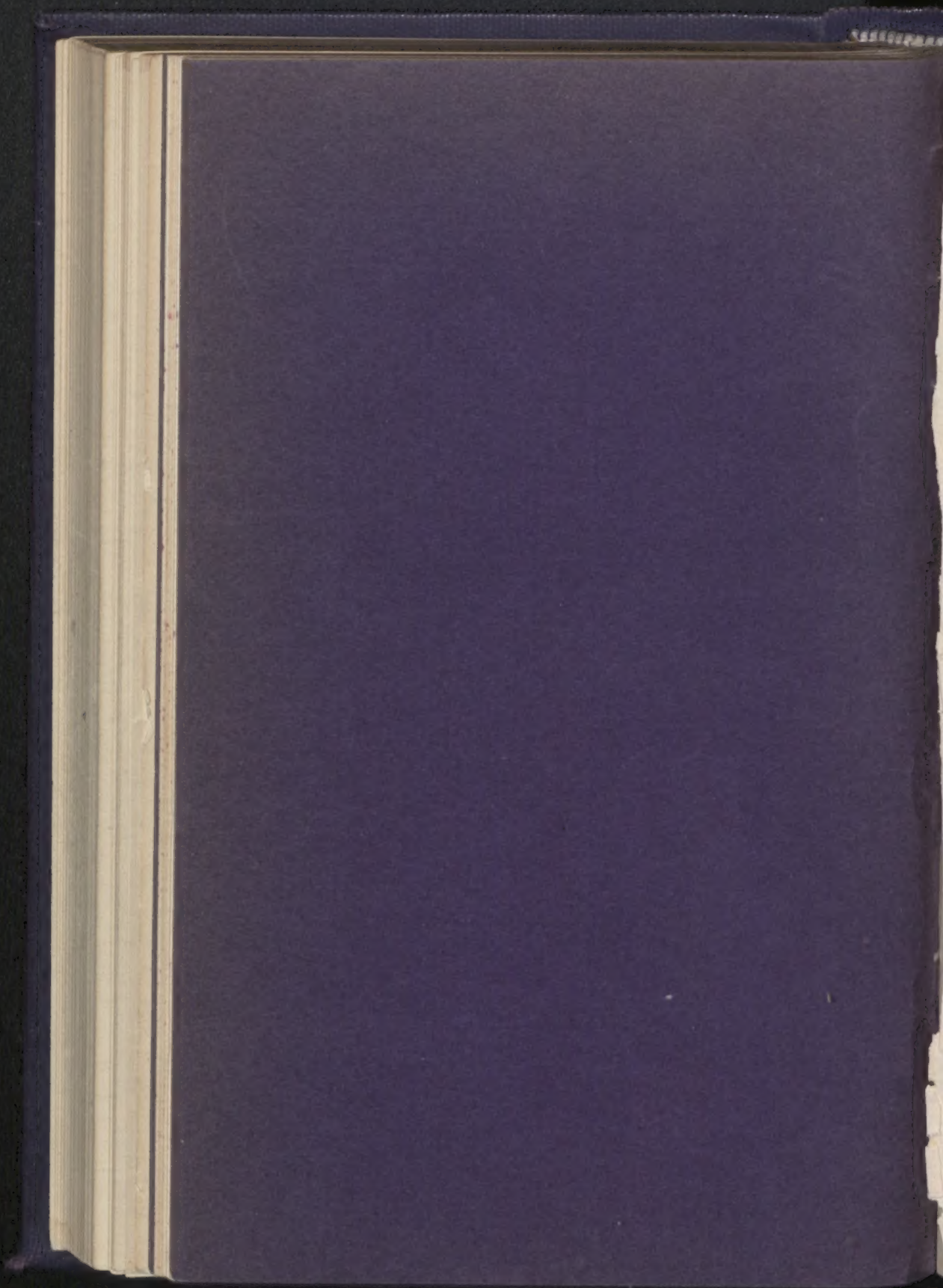
GYNECOLOGICAL DISEASES.	Cured.		Im-proved.		Unim-proved.		Died.		Not treated.	Remaining Nov. 1, 1903.	Total.
	M.	F.	M.	F.	M.	F.	M.	F.			
Abscess, pelvic.....		1									1
Anteversio uteri.....				1							1
Carcinoma uteri.....										1	1
Carcinoma, recto-vaginal wall.....		1									1
Cystic ovaries.....		2						1			3
Endometritis.....		13		1						1	15
Endometritis, with antelexion.....				1							1
Hypertrophy cervix uteri.....		1									1
Inflammation, chronic, Bartholin's gland.....		1									1
Fibroma uteri.....		1						1			2
Laceration, cervix and perineum.....		2								2	4
Laceration, cervix and perineum, with endometritis.....		3									3
Laceration, perineum.....		1									1
Laceration, cervix.....		2									2
Metritis, interstitial.....		1									1
Menorrhagia.....		1									1
Peritonitis, pelvic.....		1									1
Prolapsus uteri.....		1									1
Pyosalpinx.....		4		1		1					6
Retroversio uteri, with cystic ovary.....		1								1	2
Retroversio uteri, with metritis.....		1								1	2
Salpingo-oöphoritis, with retroversio uteri.....		1									1
Tubal pregnancy.....		1									1
Urethral caruncle.....										1	1
		40		4		1		2		7	54
OBSTETRICAL CASES.	Cured.		Im-proved.		Unim-proved.		Died.		Not treated.	Remaining Nov. 1, 1903.	Total.
	M.	F.	M.	F.	M.	F.	M.	F.			
Abortion.....		2									2
Forceps delivery.....		4									4
Normal labor.....		22								2	24
Pregnancy.....									1		1
		28							1	2	31
SUMMARY.	Cured.		Im-proved.		Unim-proved.		Died.		Not treated.	Remaining Nov. 1, 1903.	Total.
	M.	F.	M.	F.	M.	F.	M.	F.			
Gynecological.....		40		4		1		2		7	54
Medical.....	51	41	17	24	8	6	9	3	1	20	189
Obstetrical.....		28								2	31
Surgical.....	98	53	16	5	4	2	11	4	6	20	216
	146	162	33	33	12	9	20	9	8	58	490

SURGICAL OPERATIONS.

OPERATION.	DIAGNOSIS.	Cured.		Im- proved.		Unim- proved.		Died.	
		M.	F.	M.	F.	M.	F.	M.	F.
Curettment of antrum for.	Abscess, antral.....		2						
Curettment of antrum and frontal sinus.....	Abscess, antral and frontal..	1							
Incision for.....	Abscess, ischio-rectal.....	2							
Incision and drainage for.....	Abscess, psoas.....	1							
Excision of glands.....	Adenitis, cervical, tubercu- lous.....	2	2						
Excision of glands.....	Adenitis, inguinal.....	1							
Curettment for.....	Adenoids.....	1							
Enucleation.....	Adeno-fibroma, breast.....		2						
Appendicectomy.....	Appendicitis.....	7	8						
Appendicectomy.....	Appendicitis with perito- nitis.....	1							1
Enucleation of eye.....	Atrophy of eye.....	1							
Cauterization of cervix.....	Carcinoma of cervix.....			1					
Excision and repair of recto- vaginal wall.....	Carcinoma, anterior wall of rectum.....		1						
Excision.....	Carcinoma, labium major.....		1						
Complete amputation.....	Carcinoma, mammary.....		2						
Incision and curettment.....	Carbuncle.....	1							
Cholecystotomy.....	Cholecystitis, acute.....	1	1						
Cholecystotomy.....	Cholecystitis, suppurative.....	1	1						
Right salpingo-oophorec- tomy.....	Cystic ovary.....		1						
Enucleation of cyst.....	Cystic thyroid.....		1						
Plaster cast applied.....	Deflected septum.....	1							
Curettage.....	Dislocation of resected elbow.....			1					
Curettage and trachelorra- phy.....	Endometritis, chronic.....	10							
Excision of.....	Endometritis with lacerated cervix.....	1							
Excision of.....	Epithelioma of lip.....	1							
Wiring of.....	Epithelioma of cheek.....	1							
Hysterectomy for.....	False joint of clavicle.....	1							
Plaster cast applied.....	Fibroids of uterus.....		1						
Wiring.....	Fracture of condyle of hum.....	1							
Incision for.....	Fracture of olecranon.....	1							
Whitehead operation.....	Fistula in ano.....	4	2						
Ligation.....	Hemorrhoids.....	4							
Radical operation for.....	Hemorrhoids.....	1	2						
Radical operation for.....	Hernia, inguinal.....	4							
Radical operation for.....	Hydrocele.....	1							
Arthrectomy.....	Hydrocele with varicocele.....	1							
Enucleation of eye.....	Infected knee joint, follow- ing fracture of patella.....			1					
Excision.....	Irido-cyclitis.....	1							
Trachelorrhaphy.....	Keloids of finger tips.....		1						
Plastic operation for.....	Laceration of cervix.....		2						
Plastic operation for.....	Laceration of perineum.....		1						
Mastoidectomy.....	Laceration of perineum with hemorrhoids.....		1						
Trephine for.....	Mastoiditis.....	1	3	1					
Hysterectomy.....	Mastoiditis with meningitis.....		1						
Curettment for.....	Myometritis.....								1
Curettment for.....	Necrosis, lower jaw.....	1							
Nephrorrhaphy.....	Necrosis, tibia.....	1							
Drainage for.....	Nephroptosis.....		1						
Plaster cast applied.....	Pelvic abscess.....		1						
Circumcision.....	Pes planus.....			1					
Superpubic prostatectomy.....	Phimosis.....	2							
Double salpingo-oophorec- tomy.....	Prostatic hypertrophy.....								1
	Pyosalpinx.....		4						

Surgical Operations—Continued.

OPERATION	DIAGNOSIS.	Cured.		Im-proved.		Unim-proved.		Died.	
		M.	F.	M.	F.	M.	F.	M.	F.
Enucleation of.....	Sarcomata, multiple.....					1			
Examination for dislocation.	Sphenoiditis.....		1						
Perineal Urethrotomy.....	Sprain, knee.....	1							
Tenotomy.....	Stricture, urethral.....	1							
Nephrectomy.....	Strabismus.....	1							
Curettment and X-Ray.....	Tuberculosis, kidney.....							1	
Sequestrotomy.....	Tuberculosis, cutis, dorsum pedis.....		1						
Salpingo-oophorectomy.....	Tubercular osteitis tibia.....	1							
Left salpingo-oophorectomy.	Tubal pregnancy, unruptured.		2						
Ureterolithotomy.....	Tubo-ovarian abscess.....		1						
Radical operation for.....	Ureteral calculus, impacted..	1							
	Varicocele.....	8							
	Wounds, lacerated and contused.		1						
Total..... 129		59	60	4	1	1		2	2



CALENDAR.

1903.

- Jan. 30, *Friday*.—Mid-year Examinations completed in Columbian College.
- Jan. 31, *Saturday*.—Mid-year Examinations completed in Corcoran Scientific School.
- Feb. 2, *Monday*.—Second Term begins in Columbian College and Corcoran Scientific School.
- Feb. 7, *Saturday*.—Annual Meeting of the General Association of Alumni.
- April 9, *Thursday*.—Davis Prize Speaking in Columbian College.
- April 10, 11, *Friday, Saturday*.—Easter holidays.
- May 11, *Monday*.—Last day on which Theses may be presented to the Dean of the School of Graduate Studies.
- May 13, *Wednesday*.—Examinations for Degrees completed in Columbian College, Corcoran Scientific School, and School of Graduate Studies.
- May 15, *Friday*.—Examinations for Degrees completed in Departments of Law and Jurisprudence and Diplomacy.
- May 16, *Saturday*.—Examinations for Degrees completed in Departments of Medicine and Dentistry.
- May 25, *Monday*.—Doctorate Disputation.
- May 30, *Saturday*.—Final Examinations completed and session closed in Corcoran Scientific School.
- May 31, *Sunday*.—Baccalaureate Sermon.
- May 30–June 3, *Saturday to Wednesday*.—Examinations for Admission to Department of Arts and Sciences.
- June 1, *Monday*.—Commencement of Departments of Medicine and Dentistry.
- June 2, *Tuesday*.—Final Examinations completed and session closed in Columbian College.
- June 2, *Tuesday*.—Commencement of Departments of Law and Jurisprudence and Diplomacy.
- June 3, *Wednesday*.—Commencement of Columbian College, Corcoran Scientific School, and School of Graduate Studies.
- June 3, *Wednesday*.—Annual Meeting of the Board of Trustees.

SUMMER VACATION.

1903.

Sept. 26-30, *Saturday to Wednesday*.—Examinations for Admission to Department of Arts and Sciences.

Sept. 28, *Monday*.—Fall Examinations in the Departments of Medicine and Dentistry.

Sept. 30, *Wednesday*.—Academic Year begins in Department of Arts and Sciences.

Oct. 1, *Thursday*.—Academic Year begins in Departments of Medicine and Dentistry.

Oct. 5, *Monday*.—Academic Year begins in Department of Law.

Oct. 6, *Tuesday*.—Academic Year begins in Department of Jurisprudence and Diplomacy.

Nov. 26-28, *Thursday to Saturday*.—Thanksgiving recess.

RECESS FROM DECEMBER 24, 1903, TO JANUARY 4, 1904, INCLUSIVE.

1904.

Jan. 30, *Saturday*.—Mid-year Examinations completed in the Department of Arts and Sciences.

Feb. 1, *Monday*.—Second Term begins.

Feb. 22, *Monday*.—Washington's Birthday; a holiday.

March 5, *Saturday*.—Annual Meeting of the Alumni Association.

March 31, *Thursday*.—Davis Prize Speaking.

April 1-4 *Friday to Monday*.—Easter holidays.

May 2, *Monday*.—Last day on which Theses may be presented.

May 18, *Wednesday*.—Examinations for Degrees completed.

May 23, *Monday*.—Doctorate Disputation.

May 29, *Sunday*.—Baccalaureate Sermon.

May 28-June 1, *Saturday to Wednesday*.—Examinations for admission to the Department of Arts and Sciences.

May 30, *Monday*.—Commencement of the Departments of Medicine and Dentistry.

May 31, *Tuesday*.—Final Examinations completed and session closed in the Department of Arts and Science.

May 31, *Tuesday*.—Commencement of the Departments of Law, and Jurisprudence and Diplomacy.

June 1, *Wednesday*.—Commencement in the Department of Arts and Science.

